Commodore

# SLIMLINE SERIE 286-16/386SX-16/20

## Service Manual

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# *SERVICE MANUAL*

## SLIMLINE SERIES
## 286-16/386SX-16/20
## COMPUTERS

**APRIL, 1991** **PN-400405-01**

*INTERNATIONAL EDITION*
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1200 Wilson Drive, West Chester, Pennsylvania 19380 U.S.A.

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## ADDENDUM TO PAGE 3-8

***386SX: CONFIGURING RAM IN SETUP***

***SIMM'S Installed — Extended Memory Only***

*Note:* When configuring the added RAM as **Extended** Memory, the 384K already onboard will **not** be tested or shown during POST, however it will be used for Shadowing.

***SIMM'S Installed — Expanded (EMS) Memory***

*Change:* When configuring added RAM as **Expanded** Memory, ***640-1024K Relocation*** must be Disabled. ***Shadow*** may be Enabled or Disabled.

*Note:* The NEMM.SYS driver must be installed in CONFIG.SYS in order for Expanded Memory to be configured.

***Step-By-Step***

Use as Extended RAM only:

1) Install SIMM cards and move jumpers according to ***Introducing the SL386SX*** manual.

2) Disable 640-1024K Relocation option on page 2 of SetUp.

3) Enable Shadow options (optional).

4) Save settings and re-boot (ESC key).

POST will not report the 384K RAM Extended memory the system comes with, however, if Shadow is enabled the system will use this memory.

Use as Expanded RAM only or Both (Expanded ***and*** Extended):

1) Install SIMM cards and move jumpers according to ***Introducing the SL386SX*** manual.

2) Install NEMM.SYS in CONFIG.SYS.

3) Disable 640-1024K Relocation option on page 2 of SetUp.

4) Enable Shadow options (optional).

5) Set EMS Memory Size to desired amount — the remainder (if any) will be used as Extended.

6) Enable EMS Memory.

7) Save settings and re-boot (ESC key).

POST will only report memory configured as Extended (minus the 384K onboard as above). It ***does not*** report Expanded.

## ERRATUS TO PAGE 4-1

1MB SIMM Mem — All units use 390698-01.

Item #15 Cover HDD 3.5 — Correct PN-394218-01.

AT is a registered trademark of IBM

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# SECTION 1

# SPECIFICATIONS

## 1.1 SPECIFICATIONS

***DESCRIPTION***

This specification describes the functional characteristics for the Commodore Slimline Series Computers — Models SL286-16, SL386SX-16 and SL386SX-20. These systems consist of a processor, memory, control unit, video card and casework. The systems are compatible with the IBM AT series of computers. Monitors for the systems are independent units and must be VGA compatible.

***MOTHERBOARD SPECIFICATIONS***

| | *SL286-16* P/N 390330 (DTK TECH 1663) | *SL386SX-16* P/N 390916 (DTK PEER 1660C) | *SL386SX-20* P/N 390917 (DTK PEER 2060) |
|---|---|---|---|
| ***Processor*** | 80286-16 | 80386SX-16 | 80386SX-20 |
| ***Coprocessor*** | 80287-16 (optional) | 80387SX-16 (optional) | 80387SX-20 (optional) |
| ***Clock Speeds*** | 16 MHz/8 MHz | 16 MHz/8MHz | 20 MHz/10 MHz |

***Chip Set*** Chips and Technologies' NEAT compatible Chip Set; Battery backed-up real-time clock/calendar

***Ports***

| | |
|---|---|
| Parallel — Output: | Centronics (IBM Compatible) |
| Serial — Output: | (2) RS-232 (IBM AT, 9 pin) |
| Mouse Port: | IBM PS/2 Compatible mini DIN |
| Keyboard: | Standard AT style 5 PIN DIN |

***Expansion Slots*** 16 bit x 1 (expandable to 16 bit x 3 + 8 bit x 2 by use of riser card)

***Interface***

Floppy Disk Interface - IBM AT

Hard Disk Interface - IDE 40 PIN

***RAM System***

Architecture Page Interleaved

Configuration DIP:44256 x 8 + 41256 x 4
SIMM: 4 PCS

Total Memory 1MB onboard standard, expandable to 5MB

***ROM System***

Architecture Shadow RAM for BIOS and Video ROM

Configuration 64KB - Phoenix

***BLOCK MEMORY MAP***

Standard Memory

640 KBytes range from 0 to 655360 decimal (0 to 9FFFF hexidecimal)

384 KBytes range from 1048576 to 1441792 decimal (100000 to 160000 hexidecimal)

The top 384 KBytes of memory can be disabled to function with add-on boards.

***SLIMLINE SERIES CASEWORK***

Height 4.00 in

Depth 14.75 in.

Width 16.25 in.

Slim Line Enlight EN6305 Bezel - Light Gray - CBM# 394202-01
Cover - Light Beige - CBM# 394204-01
Disk Drive - Accent Beige

## 1.1 SPECIFICATIONS (Continued)

***VIDEO REQUIREMENTS***

These systems will require a separate video card to be installed into each system. The Video Graphics Array (VGA) card used in each unit shall be compatible with Western Digital VGA8/16 F512 with a horizontal scan frequency of 31.5 KHz.

***VIDEO FEATURES***

VGA Display RAM - 256K Byte, expandable to 512K

*ALPHANUMERIC MODES*

| *MODE #* | *COL X ROW* | *CHAR MATRIX* | *RESOLUTION* | *COLORS* | *STANDARD* |
|---|---|---|---|---|---|
| 0, 1 | 40 X 25 | 8 X 8 | 320 X 200 | 16 | CGA (1) |
| | | 9 X 16 | 360 X 400 | 16 OF 256K | VGA (1) & (2) |
| 2, 3 | 80 X 25 | 8 X 8 | 640 X 200 | 16 | CGA (1) |
| | | 9 X 16 | 720 X 400 | 16 OF 256K | VGA (2) |
| 7 | 80 X 25 | 9 X 14 | 720 X 350 | MONOCHROME | MDA |
| | | 9 X 16 | 720 X 400 | MONOCHROME | VGA (2) |
| 54 | 132 X 43 | 7 X 9 | 924 X 387 | COLOR | ENHANCED |
| 55 | 132 X 25 | 7 X 16 | 924 X 400 | COLOR | ENHANCED |
| 56 | 132 X 43 | 7 X 9 | 924 X 387 | MONOCHROME | ENHANCED |
| 57 | 132 X 25 | 7 X 9 | 924 X 400 | MONOCHROME | ENHANCED |

*GRAPHICS MODES:*

| | | | | |
|---|---|---|---|---|
| 4, 5 | | 320 X 200 | 4 | CGA (1) |
| | | | 4 OF 256K | VGA (1) & (2) |
| 6 | | 640 X 200 | 2 | CGA |
| | | | 2 OF 256K | VGA (1) & (2) |
| D | | 320 X 200 | 16 OF 256K | VGA (1) |
| E | | 640 X 200 | 16 OF 256K | VGA (1) |
| F | | 640 X 350 | MONOCHROME | VGA |
| 10 | | 640 X 350 | 16 OF 256K | VGA |
| 11 | | 640 X 480 | 2 OF 256K | VGA/MCGA |
| 12 | | 640 X 480 | 16 OF 256K | VGA |
| 13 | | 320 X 200 | 256 OF 256K | VGA/MCGA (1) |
| 5E | | 640 X 400 | 256 OF 256K | EXTENDED VGA |
| 58 | | 800 X 600 | 16 OF 256K | EXTENDED VGA |

***NOTES***

(1) All 200 line modes are double scanned for 400 line resolution.

(2) The VGA implementation of these modes is the default.

## 1.1 SPECIFICATIONS (Continued)

***VIDEO SIGNALS***

| *Vertical Resolution* | *Horizontal Frequency* | *Sync Polarity* | *Vertical Frequency* | *Sync Polarity* |
|---|---|---|---|---|
| 350 lines | 31.5 KHz | + | 70.1 Hz | – |
| 400 lines | 31.5 KHz | – | 70.1 Hz | + |
| 480 lines | 31.5 KHz | – | 59.9 Hz | – |
| 600 lines* | 35.2 KHz | – | 56.2 Hz | – |

*Requires an Analog Multisync compatible monitor. (MultiSync is a registered trademark of NEC)

***ADDITIONAL SYSTEM FEATURES***

Security lock for keyboard lock out (Key included with each unit)
Built-in speaker
External Configuration switches (on VGA card)
Metal case (can support monitor)
Front panel reset switch
Front panel turbo switch
LED Indicators for HDD and Turbo mode

Socket for 80287 NCP at 10 MHz
LIM 4.0 Support
This unit shall have three AT type expansion slots and two (2) XT slots on the riser card. Each of these slots is capable of accepting a card measuring 333.5 mm (13.13 in) length by 97.02 mm (3.81 in) height (excluding the connector fingers).

***SYSTEM STORAGE CAPABILITY***

The 286SX-16 Family of systems can support the following drives:
FDD — 1.44 MB 3.5″ - 313067-05
1.2 MB 5.25″ - 380825-01

HDD — 40 MB - 313241-02
50 MB - 311839-01
100 MB - 311840-01

Mass Storage — 970 40 MB Streaming Tape Drive
971 80 MB Streaming Tape Drive

System cabinet will house two (2) 5.25″ devices in drive bays. A maximum of two (2) 1/4 height hard disk drives can be mounted internally.

***POWER SUPPLY***

150 W Switching Power Supply, 115/230 V Switchable p/n 394217-01

***KEYBOARD FEATURES***

(Keyboard appears as part of 582860 and 582861)

Standard
United States ASCII 101
International 102 Key

Special keyboards and drivers are available to customize the keyboard for Germany, Spain, France, Italy and the United Kingdom.

Keyboard Type - "Typewriter"

Additional Features
Numeric Keypad
4 cursor keys in an inverted T formation

## 1.1 SPECIFICATIONS (Continued)

### *ENVIRONMENTAL SPECIFICATION*

| | |
|---|---|
| ***Temperature*** | |
| Operational | 4 to 40°C |
| Storage | −40 to +60°C |
| Gradient | +10°C/Hour |
| ***Humidity*** | |
| Relative | 8% to 80% RH (no condensation) |
| Gradient | 20% per Hour (no condensation) |
| Wet Bulb | 28°C, 78°C (no condensation), maximum |
| ***Vibration*** | |
| Operational | 0.048 in. Dbl. Amplitude (5-17 Hz)<br>0.73 G, 17 to 150 Hz<br>0.33 G, 200 to 500 Hz<br>use linear interpolation for acceleration levels between 150 Hz and 200 Hz. |
| Non-operating | 1.0 G, 5 −2000 Hz, sweep of .067 decades/minute |
| ***Shock*** | |
| Operational | 10 G, 11ms Half Sine Wave; any axis |
| Non-operating | 50 G, 25ms Square Wave; any axis<br>25 G, 25ms Square Wave; heads over data |
| ***Altitude*** | |
| Operational | −457 to 2972 Meters (−15000 to +9,750 Ft.) |
| Non-operational | −457 to 12,192 Meters (−1,500 to +40,000 Ft.) |
| ***Acoustic Noise*** | 45dBA at 1 meter |

### *REGULATORY APPROVALS*

| Standard | Description |
|---|---|
| USA/Canada | |
| UL478 | Electronic Data Processing Units and Systems |
| FCC | FCC Class B, Part 15 Subpart J |
| CSA 22.2 | Data Processing Equipment, Consumer and Commercial Products |
| Europe | |
| VDE | |
| IEC 435 | |

# SECTION 2

# THEORY OF OPERATIONS

## 2.1 OPERATION — CLOCK SPEEDS

Both the 286 and 386 Slimline Computers are dual clock systems. The 286 version can operate at either 8 MHz or 16 MHz (turbo mode). The 386 version can operate at either 10 MHz or 20 MHz (turbo mode). Both models support a software and hardware switch for changing between normal and turbo mode.

On the 286 version, holding down both Alternate "ALT" keys will switch modes. Turbo LED will indicate which mode you are in. Shorting jumper J4 will activate front panel switch for changing modes.

On the 386 versions, holding down the Control "CTRL" and Alternate "ALT" keys while pressing the Minus "–" key will change modes. If jumper J3 is installed, you can use front panel switch to change modes.

Please refer to Operations Guide and Intro Manuals, which are included with each system, for additional data.

## 2.2 TECHNICAL INFORMATION

### *MICROPROCESSOR*

The 80286/80386SX are high-performance microprocessors with 16-bit external data path, up to 16 megabytes of directly addressable physical memory and up to one gigabyte of virtual memory space.

The 80286 or 80386SX operate in two modes: protected virtual address and real address.

### *VIRTUAL ADDRESS MODE 286*

The virtual address mode provides a 1-gigabyte virtual address space mapped onto a 16 megabyte physical address space. Virtual address space is larger than physical address space and the use of a virtual address that does not map to a physical address location will cause a restartable interrupt.

This mode uses 32-bit pointers that consist of a 16-bit selector and offset components. The selector specifies an index into a memory-resident table and the 24-bit base address of the desired segment is obtained from the memory table. A 16-bit offset is added to the segment base address to form the physical address. The microprocessor automatically references the tables whenever a segment register is loaded with a selector. Instructions that load a segment register will refer to the memory-based tables without additional program support. The memory-based tables contain 8-byte values called descriptors.

### *REAL ADDRESS MODE 286*

In this mode, physical memory is a contiguous array of up to 1 megabyte. The selector portion of the pointer is interpreted as the upper 16 bits of a 20-bit address and the remaining 4 bits are set to zero. This mode of operation is compatible with the 8088 and the 8086.

Segments in this mode are 64KB in size and may be read, written or executed. An interrupt may occur if data operands or instructions attempt to wrap around the end of a segment. In this mode, the information contained in the segment does not use the full 64KB and the unused end of the segment may be overlayed by another segment to reduce physical memory requirements.

### *PROTECTED VIRTUAL ADDRESS MODE 386*

In protected mode, software can perform a task switch to enter virtual 8086 mode tasks. Each task behaves with 8086 semantics, thus allowing 8086 software (an application program or an entire operation system) to execute. The virtual 8086 tasks can be isolated and protected from one another and the host 386SX microprocessor operation system by use of paging.

Protected mode will use one of two different address spaces, depending on whether or not paging is enabled. Every selector has a logical base address of up to 32 bits in length. This 32-bit logical base address is added to the effective address to form a final 32-bit linear address. If paging is disabled, this final linear address reflects physical memory and is truncated so that only the lower 24 bits of this address are used to address the 16 megabyte memory address space. If paging is enabled this final linear address reflects a 32-bit address. This is translated through the paging unit to form a 16-megabyte physical address.

### *REAL ADDRESS MODE 386*

In real mode the 386SX microprocessor operates as a very fast 8086, but with a 32-bit extension if desired. Real mode is required primarily to set up the processor for protected mode operation.

The segmentation unit shifts the selector left four bits and adds the result to the effective address to form the linear address. This linear address is limited to 1 megabyte. In addition, real mode has no paging capability.

## 2.2 TECHNICAL INFORMATION (Continued)

***SYSTEM TIMERS 286/386***

The system has three programmable timer/counters controlled by an Intel 8254-2 timer/counter chip. These are channels 0 through 2 defined as follows:

| *Channel 0* | *System Timer* |
|---|---|
| GATE 0 | TIED ON |
| CLK IN 0 | 1.190MHz OSC |
| CLK OUT 0 | 8259A IRQ 0 |

| *Channel 1* | *Refresh Request Generator* |
|---|---|
| GATE 1 | TIED ON |
| CLK IN 1 | 1.190MHz OSC |
| CLK OUT 1 | Request Refresh Cycle |

***NOTE:*** Channel 1 is programmed to generate a 15-microsecond period signal.

| *Channel 2* | *Tone Generation for Speaker* |
|---|---|
| GATE 2 | Controlled by bit 0 of port hex 61 PPI bit |
| CLK IN 2 | 1.190MHz OSC |
| CLK OUT 2 | Used to drive speaker |

The 8254-2 timer/counter is treated by system programs as an arrangement of four programmable external I/O ports. Three are treated as counters; the fourth is a control register for mode programming.

***SYSTEM INTERRUPTS 286/386***

Sixteen levels of system interrupts are provided by the 80286 NMI and two 8259A Interrupt Controller chips. The following shows the interrupt-level assignments in decreasing priority:

| *Level* | *Function* |
|---|---|
| Microprocessor NMI | Parity or I/O Channel Check |
| Interrupt Controllers CTLR1 CTLR2 | |
| IRQ 0 | Timer Output 0 |
| IRQ 1 | Keyboard (Output Buffer Full) |
| IRQ 2 | Interrupt from CTLR 2 |
| IRQ 8 | Realtime Clock Interrupt |
| IRQ 9 | Software Redirected to INT OAH (IRQ2) |
| IRQ 10 | Reserved |
| IRQ 11 | Reserved |
| IRQ 12 | Reserved |
| IRQ 13 | Coprocessor |
| IRQ 14 | Fixed Disk Controller |
| IRQ 15 | Reserved |
| IRQ 3 | Serial Port 2 |
| IRQ 4 | Serial Port 1 |
| IRQ 5 | Parallel Port 2 |
| IRQ 6 | Diskette Controller |
| IRQ 7 | Parallel Port 1 |

## 2.2 TECHNICAL INFORMATION (Continued)

***ROM SUBSYSTEM 286/386***

The ROM subsystem has a 32K by 16-bit arrangement consisting of two 32K by 8-bit ROM/EPROM modules. The odd and even address codes reside in separate modules. The top of the first megabyte and the bottom of the last megabyte address space is assigned to ROM (hex 0F0000 and hex FF0000). Parity checking is not done on ROM.

DTK BIOS has been supported and placed in this subsystem.

***RAM SUBSYSTEM 286/386***

The RAM subsystem starts at address hex 000000 of the 16M address space. It consists of either 640 KB or 1 MB in the form of 256K or 64K by 1 bit RAM modules. Memory refresh forces one memory cycle every 15 microseconds through channel 1 of the timer/counter. The following functions are performed by the RAM initialization program:

- Write operation to any memory location.
- Initialize channel 1 of the timer/counter to the rate generation mode (15 microseconds).

***NOTE:*** The memory can be used only after being accessed or refreshed eight times.

***PIPELINED ADDRESS 386***

Address pipelining is the option of requesting the address and the bus cycle definition of the next internally pending bus cycle before the current bus cycle is acknowledged with READY # asserted. ADS# is asserted by the 386SX Microprocessor when the next address is issued. The address pipelining option is controlled on a cycle-by-cycle basis with the NA# input signal.

Once a bus cycle is in progress and the current address has been valid for at least one entire bus state, the NA# input is sampled at the end of every phase one until the bus cycle is acknowledged.

***DIRECT MEMORY ACCESS 286/386***

Eight DMA channels are supported by the system. Two Intel 8237-5 DMA controller chips (four channels in each chip) are used. DMA channels are assigned as follows:

| *CTR 1* | | *CTR 2* | |
|---|---|---|---|
| CH 0 | Spare | CH 4 | Cascade for CTRL 1 |
| CH 1 | SDLC | CH 5 | Spare |
| CH 2 | Diskette | CH 6 | Spare |
| CH 3 | Spare | CH 7 | Spare |

***DMA CHANNELS 286/386***

Channels 0 through 3 are contained in DMA controller 1. Transfers of 8-bit data, 8-bit I/O adapters and 8-bit or 16-bit system memory are supported by these channels. Each of these channels will transfer data in 64KB blocks throughout the 16-megabyte system address space.

Channels 4 through 7 are contained in DMA controller 2. To cascade channels 0 through 3 to the microprocessor, use channel 4. Transfers of 16-bit data between 16-bit adapters and 16-bit system memory are supported by channels 5, 6 and 7. DMA channels 5 through 7 will transfer data in 128KB blocks throughout the 16-megabyte system address space. These channels will not transfer data on odd-byte boundaries.

The addresses for the page register are as follows:

| *Page Register* | *I/O Hex Address* |
|---|---|
| DMA Channel 0 | 0087 |
| DMA Channel 1 | 0083 |
| DMA Channel 2 | 0081 |
| DMA Channel 3 | 0082 |
| DMA Channel 5 | 008B |
| DMA Channel 6 | 0089 |
| DMA Channel 7 | 008A |
| Refresh | 008F |

## 2.2 TECHNICAL INFORMATION (Continued)

***DMA CHANNELS (Continued)***

Address generation for the DMA channels is as follows:

| *FOR DMA CHANNELS 3 THROUGH 0* | | |
|---|---|---|
| *Source* | *DMA Page Registers* | *8237A - 5* |
| Address | A23 ⟺ A16 | A15 ⟺ A0 |

*NOTE:* To generate the addressing signal "byte high enable" (BHE), invert address line A0.

| *FOR DMA CHANNELS 7 THROUGH 5* | | |
|---|---|---|
| *Source* | *DMA Page Registers* | *8237A - 5* |
| Address | A23 ⟺ A17 | A16 ⟺ A1 |

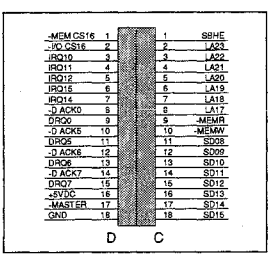
*NOTE:* The BHE and A0 addressing signals are forced to a logic 0. DMA channel addresses do not increase or decrease through page boundaries (64KB for channels 0 through 3 and 128KB for channels 5 through 7).

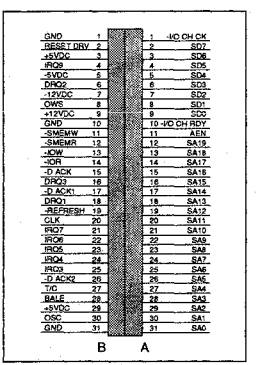
***I/O CHANNEL SLOTS***

The I/O channel supports:

- Refresh of system memory from channel, microprocessors.
- Selection of data accesses (either 8 bit or 16 bit).
- Interrupts.
- 24-bit memory addresses (16MB).
- I/O wait-state generation.
- I/O address space hex 100 to hex 3FF.
- Open-bus structure (allowing multiple microprocessors to share the system's resources, including memory).
- DMA channels.

Numbering of the I/O slots is as follows:



## 2.2 TECHNICAL INFORMATION (Continued)

***MATH COPROCESSOR 286/386***

The math coprocessor functions as an I/O device through I/O port addresses hex 0F8, 0FA and 0FC. The microprocessor sends OP codes and operands to I/O ports. The microprocessor also receives and stores results through the same I/O ports. The "busy" signal sent by the coprocessor forces the microporcessor to wait until the coprocessor is finished executing.

The following describes the math coprocessor controls:

***0F0***

The latched math coprocessor busy signal can be cleared with an 8-bit "Out" command to port F0. The coprocessor will latch "busy" if it asserts its error signal. Data output should be zero.

***0F1***

The math coprocessor will reset if an 8-bit "Out" command is sent to port F1. Again, the data output should be zero.

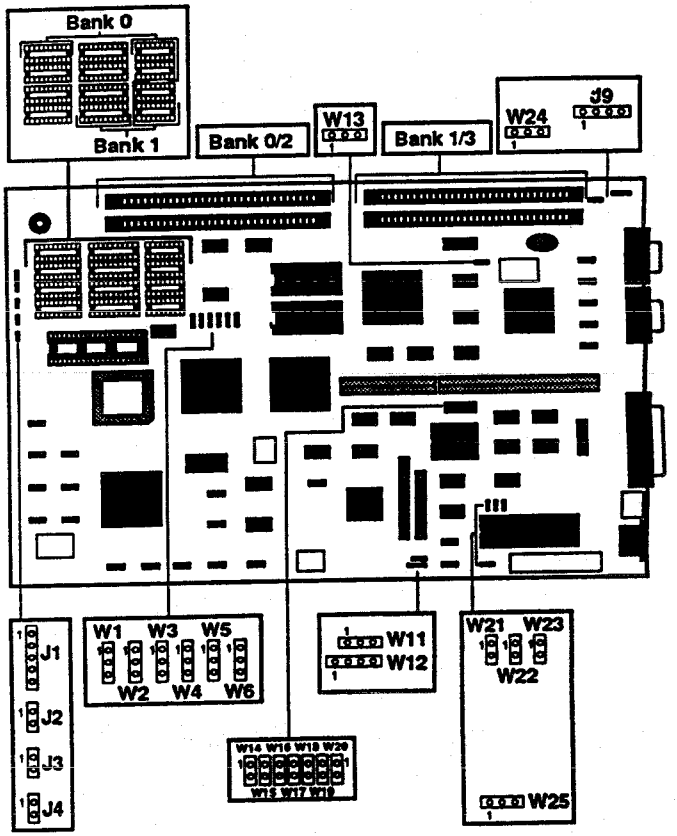
# SECTION 3

# TROUBLESHOOTING

## 3.1 RAM BANK LOCATIONS, JUMPER SETTINGS

| *JUMPERS* | *FUNCTION* | *SL286-16* |
|---|---|---|
| W1-W6 | Memory Bank Selection | 1 & 2 Shorted - One or Two RAM Banks |
| | | 2 & 3 Shorted - Three or Four Ram Banks |
| W11 | Hard Drive IDE Select | 1 & 2 Shorted - Gates IRQ14 W/ Drive Select or Busy Signal (Use for CP-342) |
| | | 2 & 3 Shorted - IDE Normal Operations |
| W14 | Floppy Disk Drive | Shorted - Enable |
| | | Open - Disable |
| W15, W16 | Serial Port 1 | Both Shorted - COM1<br>W15 Open, W16 Shorted - Disable COM1 |
| | | Both Open - COM3<br>W15 Shorted, W16 Open - Disable COM3 |
| W17, W18 | Serial Port 2 | Both Shorted - COM2<br>W17 Open, W18 Shorted - Disable COM2 |
| | | Both Open - COM4<br>W17 Shorted, W18 Open - Disable COM4 |
| W21 | Hard Drive Enable | Shorted - Enable |
| | | Open - Disable |
| W22 | Game Port | Shorted - Enable |
| | | Open - Disable |
| W23 | Display Mode Settings | Open - Monochrome |
| | | Shorted - Color |
| W24 | Battery Select | 1 & 2 Shorted - External |
| | | 2 & 3 Shorted - Internal |
| W25 | Power Good | 1 & 2 Shorted - Power Fail Detect Active (Default) |
| | | 2 & 3 Shorted - External Power Good Active |

| | |
|---|---|
| J1 | Keylock |
| J2 | Turbo LED |
| J3 | Reset |
| J4 | Turbo Switch |
| J8 | Power Connector |
| J9 | External Battery Connector |
| J13 | PS/2 Mouse Connector |
| J14 | Keyboard Connector |




*THE LOCATION OF JUMPERS AND BANKS*

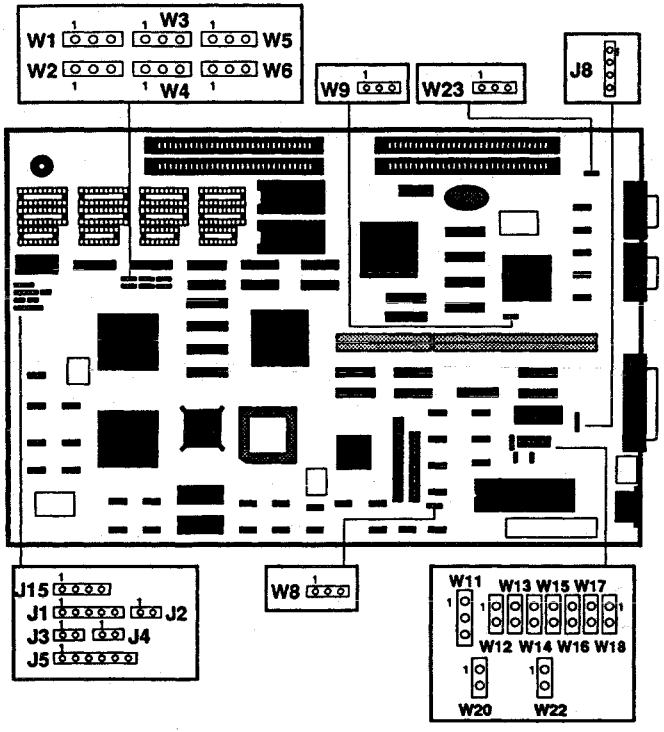
## RAM LOCATIONS — SL286-16

| | 512KB A | 512KB B | 640KB | 640KB | 1MB | 1MB | 1.5MB | 2MB | 2MB | 3MB | 4MB | 5MB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W1-W6 | ALL 2-3 | ALL 1-2 | ALL 1-2 | ALL 1-2 | ALL 1-2 | ALL 1-2 | ALL 2-3 | ALL 2-3 | ALL 1-2 | ALL 2-3 | ALL 1-2 | ALL 2-3 |
| **BANK 0** | | | | | | | | | | | | |
| U1 | 44256 | | 44256 | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U2 | 44256 | | 44256 | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U3 | 44256 | | 44256 | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U4 | 44256 | | 44256 | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U20 | 41256 | | 41256 | | | 41256 | 41256 | 41256 | | 41256 | | 41256 |
| U21 | 41256 | | 41256 | | | 41256 | 41256 | 41256 | | 41256 | | 41256 |
| **BANK 1** | | | | | | | | | | | | |
| U13 | | | | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U14 | | | | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U15 | | | | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U16 | | | | | | 44256 | 44256 | 44256 | | 44256 | | 44256 |
| U22 | | | | | | 41256 | 41256 | 41256 | | 41256 | | 41256 |
| U23 | | | | | | 41256 | 41256 | 41256 | | 41256 | | 41256 |
| **BANK 0 (2)** | | | | | | | | | | | | |
| CON1 | | 41256 | | 41256 | 41256 | | 41256 | 41256 | 411000 | 411000 | 411000 | 411000 |
| CON2 | | 41256 | | 41256 | 41256 | | 41256 | 41256 | 411000 | 411000 | 411000 | 411000 |
| **BANK 1 (3)** | | | | | | | | | | | | |
| CON3 | | | 4164 | 4164 | 41256 | | | 41256 | | | 411000 | 411000 |
| CON4 | | | 4164 | 4164 | 41256 | | | 41256 | | | 411000 | 411000 |

### 3.1 RAM BANK LOCATIONS, JUMPER SETTINGS (Continued)

| *JUMPERS* | *FUNCTION* | *SL386SX-16/20* |
|---|---|---|
| W1-W6 | Memory Bank Selection | 1 & 2 Shorted - One or Two RAM Banks<br>2 & 3 Shorted - Three or Four Ram Banks |
| W8 | Power Good Selection | 1 & 2 Shorted - Internal Power Good<br>2 & 3 Shorted - External Power Good |
| W9 | IRQ Selection | 1 & 2 Shorted - IRQ7<br>2 & 3 Shorted - IRQ5 |
| W11 | 80387SX Enable | 1 & 2 Shorted - Enable<br>2 & 3 Shorted - Disable |
| W12, W13 | Parallel Printer Port | Both Shorted - LPT1<br>Both Open - LPT2<br>One Open and One Shorted - Disable |
| W14 | Floppy Disk Drive | Shorted - Enable<br>Open - Disable |
| W15, W16 | Serial Port 1 | Both Shorted - COM1<br>Both Open - COM3<br>One Shorted and One Open - Disable |
| W17, W18 | Serial Port 2 | Both Shorted - COM2<br>Both Open - COM4<br>One Shorted and One Open - Disable |
| W20 | Hard Drive Select | Shorted - Enable IDE<br>Open - Disable IDE |
| W22 | Display Mode Selection | Shorted - Color Mode<br>Open - Mono Mode |
| W23 | Battery Selection | 1 & 2 Shorted - External Battery<br>2 & 3 Shorted - Onboard Battery |

| | |
|---|---|
| J1 | Keylock |
| J2 | Reset |
| J3 | Turbo Switch |
| J4 | Turbo LED |
| J5 | Speed LED (7 Segment LED) |
| J6 | IDE Hard Disk Connector |
| J7 | Floppy Connector |
| J8 | External Battery Connector |
| J9 | Power Connector |
| J10 | Serial Port COM1 |
| J11 | Serial Port COM2 |
| J12 | Parallel Printer Port |
| J13 | PS/2 Mouse Connector |
| J14 | Keyboard Connector |
| J15 | IDE Hard Disk LED |

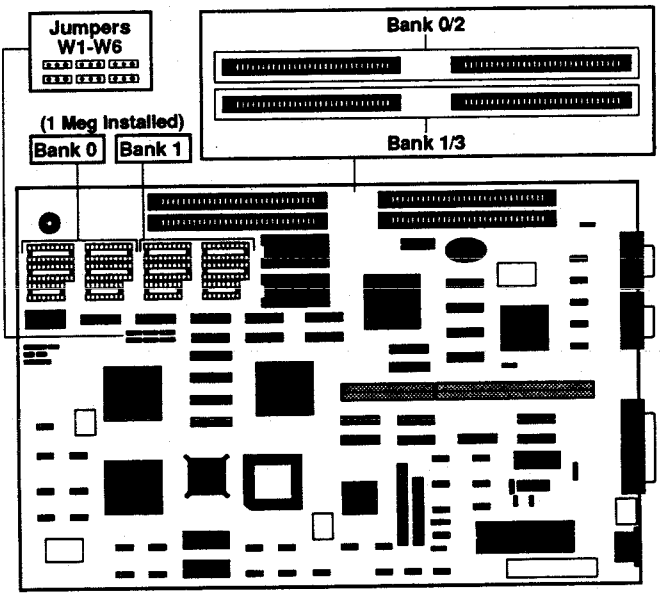



*JUMPERS ON THE SL 386SX MAINBOARD*

## RAM LOCATIONS — SL386SX-16/20

| | 640KB | 640KB | 1MB* | 1MB* | 1.5MB | 2MB | 2MB | 3MB | 4MB | 5MB |
|---|---|---|---|---|---|---|---|---|---|---|
| W1-W6 | ALL 1-2 | ALL 1-2 | ALL 1-2 | ALL 1-2 | ALL 2-3 | ALL 2-3 | ALL 1-2 | ALL 2-3 | ALL 1-2 | ALL 2-3 |
| **BANK 0** | | | | | | | | | | |
| U1 | 44256 | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U2 | 44256 | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U3 | 41256 | | 41256 | | 41256 | 41256 | | 41256 | | 41256 |
| U12 | 44256 | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U13 | 44256 | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U14 | 41256 | | 41256 | | 41256 | 41256 | | 41256 | | 41256 |
| **BANK 1** | | | | | | | | | | |
| U22 | | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U23 | | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U24 | | | 41256 | | 41256 | 41256 | | 41256 | | 41256 |
| U26 | | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U27 | | | 44256 | | 44256 | 44256 | | 44256 | | 44256 |
| U28 | | | 41256 | | 41256 | 41256 | | 41256 | | 41256 |
| **BANK 0 (2)** | | | | | | | | | | |
| CON1 | | 41256 | | 41256 | 41256 | 41256 | 411000 | 411000 | 411000 | 411000 |
| CON2 | | 41256 | | 41256 | 41256 | 41256 | 411000 | 411000 | 411000 | 411000 |
| **BANK 1 (3)** | | | | | | | | | | |
| CON3 | 4164 | 4164 | | 41256 | | 41256 | | | 411000 | 411000 |
| CON4 | 4164 | 4164 | | 41256 | | 41256 | | | 411000 | 411000 |

*1 MB any Bank 0 can be used with any Bank 1.




*RAM BANKS AND JUMPERS FOR BANK SELECTION*

### 3.1 RAM BANK LOCATIONS, JUMPER SETTINGS (Continued)

*386SX: CONFIGURING RAM IN SETUP*
To configure the RAM properly in the 386SX, enter the second screen of the SetUp menu. (Ctrl-Alt-S followed by PgUp to enter CS8221 options).

*NO SIMM'S INSTALLED:* With no added RAM installed in the 386SX, you can either ***Enable*** the ***Shadow Bios Rom:*** **or** the ***640-1024K Relocation:*** but you cannot have both Enabled.

*SIMM'S INSTALLED - EXTENDED MEMORY ONLY:* To use all the added RAM as Extended Memory, ***Enable*** the ***Shadow Bios Rom:*** and ***Disable*** the ***640-1024K Relocation:*** option.

*SIMM'S INSTALLED - EXPANDED (EMS) MEMORY:* There are many ways to configure the systems memory and many possible combinations to consider which can make the SetUp confusing. The chart below is but one way that will correctly configure the RAM in CMOS for partial or total use as Expanded Memory. It is by no means the only way to set it up.

As with No RAM installed, either ***Shadow*** or ***Relocation*** should be ***Enabled,*** but not both.

| | | |
|---|---|---|
| EMS Base Memory Address: | C800 | C800 |
| EMS Base I/O Address: | 208H/209H | 218H/219H |
| EMS Page 0 Reg. Extension: | 4M to 6M | 1M to 2M |
| EMS Page 1 Reg. Extension: | 4M to 6M | 1M to 2M |
| EMS Page 2 Reg. Extension: | 4M to 6M | 1M to 2M |
| EMS Page 3 Reg. Extension: | 4M to 6M | 1M to 2M |
| EMS Memory Size: | 1.0M | 2.0M |
| EMS Wait States: | 2 Wait States | 2 Wait States |
| EMS Memory: | Enabled | Enabled |

| | | |
|---|---|---|
| EMS Base Memory Address: | C800 | C800 |
| EMS Base I/O Address: | 208H/209H | 218H/219H |
| EMS Page 0 Reg. Extension: | 2M to 4M | 1M to 2M |
| EMS Page 1 Reg. Extension: | 2M to 4M | 1M to 2M |
| EMS Page 2 Reg. Extension: | 2M to 4M | 1M to 2M |
| EMS Page 3 Reg. Extension: | 2M to 4M | 1M to 2M |
| EMS Memory Size: | 3.0M | 4.0M |
| EMS Wait States: | 2 Wait States | 2 Wait States |
| EMS Memory: | Enabled | Enabled |

## 3.2 DIAGNOSTIC MESSAGES

***PHOENIX BIOS POST AND BOOT MESSAGES — AT BIOS ERROR MESSAGES***

| *MESSAGE* | *POSSIBLE CAUSE* | *SOLUTION* |
|---|---|---|
| Diskette configuration error | The specified configuration is not supported. | Change the configuration. |
| Diskette drive reset failed | The diskette adapter has failed. | Check the diskette adapter. |
| Diskette drive 1 seek failure | The B: drive failed or is missing. | Check the B: drive. |
| Diskette drive 0 seek failure | The A: drive has either failed or is missing. | Check the A: drive. |
| Diskette drive reset failed | The diskette adapter has failed. | Check the diskette adapter. |
| Diskette read failure — strike F1 to retry boot | The diskette is either not formatted or defective. | Replace the diskette with a bootable diskette and retry. |
| Display adapter failed; using alternate. | The color/monochrome switch is set wrong.<br>The primary video adapter failed. | Change the switch to the correct setting.<br>Check the primary video adapter. |
| Errors found; disk X: Failed initialization. | POST reports hard disk configuration information is incorrect. | Rerun SETUP and enter correct hard disk information. |
| Errors found; incorrect configuration information memory size miscompare. | POST reports the size of base or expansion memory does not agree with configuration information. | Rerun SETUP and enter correct memory size. |
| Gate A20 failure. | Protected mode cannot be enabled. | Check the system board. |
| Hard disk configuration error. | The specified configuration is not supported. | Correct the fixed disk configuration. |
| Hard disk controller failure. | The controller card has failed. | Replace the controller card. |
| Hard disk failure. | Bad disk. | Retry boot, if that doesn't work, replace the hard disk. |
| Hard disk read failure — strike F1 to retry boot. | Defective fixed disk. | Retry boot, if that doesn't work, replace the hard disk. |
| FDD controller failure. | Disk and diskette controller failed. | Replace the controller card. |
| FDD A is not installed. | Can not find diskette controller for diskette drive A. | Either install or replace the controller card. |
| FDD B is not installed. | Can not find diskette controller for diskette drive B. | Either install or replace the controller card. |
| Invalid configuration information — please run SETUP program. | Memory size is incorrect.<br>Display adapter is configured incorrectly.<br>Wrong number of diskette drives. | Run the SETUP utility. |

### 3.2 DIAGNOSTIC MESSAGES (Continued)

***PHOENIX BIOS POST AND BOOT MESSAGES — AT BIOS ERROR MESSAGES (Continued)***

| *MESSAGE* | *POSSIBLE CAUSE* | *SOLUTION* |
|---|---|---|
| Keyboard clock line failure.<br>Keyboard data line failure. | Either the keyboard or the keyboard cable connection is defective. | Make sure the keyboard cable and keyboard are connected properly. |
| Keyboard controller failure. | The keyboard controller firmware has failed. | Check the keyboard controller. |
| Keyboard stuck key failure. | A key(s) is jammed. | Try pressing the key(s) again. |
| Memory address line failure at *hex-value*, read *hex-value*, expecting *hex-value*. | Circuitry associated with the memory chips has failed. | Check the circuitry. |
| Memory data line failure at *hex-value*, read *hex-value*, expecting *hex-value*. | One of the memory chips or associated circuitry has failed. | Replace the memory chips. |
| Memory high address line failure at *hex-value*, read *hex-value*, expecting *hex-value*. | Circuitry associated with the memory chips has failed. | Check the circuitry. |
| Memory double word logic failure at *hex-value*, read *hex-value*, expecting *hex-value*. | Memory chip circuitry failed. | Replace the memory chip. |
| Memory odd/even logic failure at *hex-value*, read *hex-value*, expecting *hex-value*. | Circuitry associated with the memory chips has failed. | Check the circuitry. |
| Memory parity failure at *hex-value*, read *hex-value*, expecting *hex-value*. | One of the parity memory chips has failed. | Try replacing the memory chips. |
| Memory write/read failure at *hex-value*, read *hex-value*, expecting *hex-value*. | One of the memory chips has failed. | Try replacing the memory chips. |
| No boot device available — strike F1 to retry boot. | Either diskette drive A:, the hard disk, or the diskette itself is defective. | Retry boot, if that doesn't work, replace the diskette or the hard disk. |
| No boot sector on hard disk — strike F1 to retry boot. | The C: drive is not formatted or is not bootable. | Format the C: drive, make it bootable. |
| Not a boot diskette — strike F1 to retry boot. | The diskette in Drive A: is not formatted as a bootable diskette. | Replace the diskette with a bootable diskette and retry boot. |
| No timer tick interrupt. | The timer chip has failed. | Check the timer chip on the system board. |
| *Hex-value* optional ROM bad checksum = *hex-value*. | The peripheral card contains a defective ROM. | Replace the peripheral card. |

3.2 DIAGNOSTIC MESSAGES (Continued)

*PHOENIX BIOS POST AND BOOT MESSAGES — AT BIOS ERROR MESSAGES (Continued)*

| *MESSAGE* | *POSSIBLE CAUSE* | *SOLUTION* |
|---|---|---|
| Shutdown failure. | The keyboard controller or its associated logic has failed. | Check the keyboard controller. |
| Time-of-day clock stopped. | The CMOS real time clock chip has failed. | Run the SETUP utility. |
| Time-of-day not set — please run SETUP program. | Clock not set. | Run the SETUP utility. |
| Timer chip counter 2 failed. | Chip failed. | Check the timer chip system board. |
| Timer or interrupt controller bad. | Either the timer chip or the interrupt controller is defective. | Check the timer chip or the interrupt controller on the system board. |
| Unexpected interrupt in protected mode. | The non-maskable interrupt (NMI) port can't be disabled. | Check the system board, particularly the logic associated with the non-maskable interrupt. |

*PHOENIX BIOS POST AND BOOT MESSAGES — INFORMATIONAL MESSAGES*

| *MESSAGE* | *MEANING* |
|---|---|
| *nnnK* Base Memory | The amount of base memory that tested successfully. |
| *nnnk* Expanded Memory | The amount of expanded memory that tested successfully. |
| *nnnK* Extended Memory | The amount of extended memory that tested successfully. |
| *nnnK* Extra Memory | The amount of extra memory that tested successfully. |
| *nnnK* Standard Memory | The amount of standard memory that tested successfully. |
| Decreasing available memory | This message immediately follows any memory error message, and informs you that the memory chips are failing. |
| Memory tests terminated by keystroke. | This message indicates that you have pressed the Spacebar while the memory tests were running. This stops the memory tests. |
| Strike the F1 key to continue | This message indicates that an error was found during POST. Pressing the F1 key allows the system to attempt to boot. |
| Base Memory size = 64K | Used in reporting base memory for Extended Features. |
| Extended Memory size = 00000K | Used in reporting extended memory size for Extended Features. |

### 3.2 DIAGNOSTIC MESSAGES (Continued)

***PHOENIX BIOS RUN-TIME MESSAGES***

| *MESSAGE* | *POSSIBLE CAUSE* | *SOLUTION* |
|---|---|---|
| I/O card parity interrupt at *address*. Type (S)hut off NMI, (R)eboot, other keys to continue. | The peripheral card has failed. | Type (S)hut off NMI.<br>***Note:*** This will only temporarily allow the user to continue. The user must replace the peripheral card. |
| Memory parity interrupt at *address*. Type (S)hut off NMI, (R)eboot, other keys to continue. | A memory chip(s) has failed. | Type (S)hut off NMI.<br>***Note:*** This will only temporarily allow the user to continue. The user must replace the memory chip(s). |
| Unexpected HW interrupt *interrupt* at *address*. Type (R)eboot, other keys to continue. | This could be any hardware-related problem.<br>***Note:*** Not displayed if the extended interrupt handler is not enabled. | Check the hardware. |
| Unexpected SW interrupt *interrupt* at *address*. Type (R)eboot, other keys to continue. | There is an error(s) in the software program.<br>***Note:*** Not displayed if the extended interrupt handler is not enabled. | Try turning the machine off and then on again, if that doesn't work, check the program. |
| Unexpected type 02 interrupt at address. Type (S)hut off NMI, (R)eboot, other keys to continue. | There is an error(s) in the software program.<br>***Note:*** Not displayed if the extended interrupt handler is not enabled. | Try turning the machine off and then on again, if that doesn't work, check the program. |

### 3.2 DIAGNOSTIC MESSAGES (Continued)

***PHOENIX BIOS BEEP CODES — FATAL SYSTEM BOARD ERRORS***

| *BEEP CODE* | *CONTENTS PORT 80h* | *DESCRIPTION* |
|---|---|---|
| none | 01h | CPU register test in progress |
| 1-1-3 | 02h | CMOS write/read failure |
| 1-1-4 | 03h | ROM BIOS checksum failure |
| 1-2-1 | 04h | Programmable interval timer failure |
| 1-2-2 | 05h | DMA initialization failure |
| 1-2-3 | 06h | DMA page register write/read failure |
| 1-3-1 | 08h | RAM refresh verification failure |
| none | 09h | First 64K RAM test in progress |
| 1-3-3 | 0Ah | First 64K RAM chip or data line failure, multi-bit |
| 1-3-4 | 0Bh | First 64K RAM odd/even logic failure |
| 1-4-1 | 0Ch | Address line failure first 64K RAM |
| 1-4-2 | 0Dh | Parity failure first 64K RAM |
| 2-1-1 | 10h | Bit 0 first 64K RAM failure |
| 2-1-2 | 11h | Bit 1 first 64K RAM failure |
| 2-1-3 | 12h | Bit 2 first 64K RAM failure |
| 2-1-4 | 13h | Bit 3 first 64K RAM failure |
| 2-2-1 | 14h | Bit 4 first 64K RAM failure |
| 2-2-2 | 15h | Bit 5 first 64K RAM failure |
| 2-2-3 | 16h | Bit 6 first 64K RAM failure |
| 2-2-4 | 17h | Bit 7 first 64K RAM failure |
| 2-3-1 | 18h | Bit 8 first 64K RAM failure |
| 2-3-2 | 19h | Bit 9 first 64K RAM failure |
| 2-3-3 | 1Ah | Bit 10 first 64K RAM failure |
| 2-3-4 | 1Bh | Bit 11 first 64K RAM failure |
| 2-4-1 | 1Ch | Bit 12 first 64K RAM failure |
| 2-4-2 | 1Dh | Bit 13 first 64K RAM failure |
| 2-4-3 | 1Eh | Bit 14 first 64K RAM failure |
| 2-4-4 | 1Fh | Bit 15 first 64K RAM failure |

3.2 DIAGNOSTIC MESSAGES (Continued)

*PHOENIX BIOS BEEP CODES — FATAL SYSTEM BOARD ERRORS (Continued)*

| *BEEP CODE* | *CONTENTS PORT 80h* | *DESCRIPTION* |
|---|---|---|
| 3-1-1 | 20h | Slave DMA register failure |
| 3-1-2 | 21h | Master DMA register failure |
| 3-1-3 | 22h | Master interrupt mask register failure |
| 3-1-4 | 23h | Slave interrupt mask register failure |
| none | 25h | Interrupt vector loading in progress |
| 3-2-4 | 27h | Keyboard controller test failure |
| none | 28h | CMOS power failure and checksum calculation in progress |
| none | 29h | CMOS configuration validation in progress |
| 3-3-4 | 2Bh | Screen initialization failure |
| 3-4-1 | 2Ch | Screen retrace test failure |
| 3-4-2 | 2Dh | Search for video ROM in progress |
| none | 2Eh | Screen running with video ROM |
| none | 30h | Screen operable |
| none | 30h | Screen running with video ROM |
| none | 31h | Monochrome monitor operable |
| none | 32h | Color monitor (40 column) operable |
| none | 33h | Color monitor (80 column) operable |

### 3.2 DIAGNOSTIC MESSAGES (Continued)

***PHOENIX BIOS BEEP CODES — NON-FATAL SYSTEM BOARD ERRORS***

| *BEEP CODE* | *CONTENTS PORT 80h* | *DESCRIPTION* |
|---|---|---|
| 4-2-1 | 34h | Timer tick interrupt test in progress or failure |
| 4-2-2 | 35h | Shutdown test in progress or failure |
| 4-2-3 | 36h | Gate A20 failure |
| 4-2-4 | 37h | Unexpected interrupt in protected mode |
| 4-3-1 | 38h | RAM test in progress or address failure > FFFFh |
| 4-3-3 | 3Ah | Interval timer channel 2 test or failure |
| 4-3-4 | 3Bh | Time-of-Day clock test or failure |
| 4-4-1 | 3Ch | Serial port test or failure |
| 4-4-2 | 3Dh | Parallel port test or failure |
| 4-4-3 | 3Eh | Math coprocessor test or failure |

Phoenix BIOS messages reprinted with permission of Phoenix Technologies.

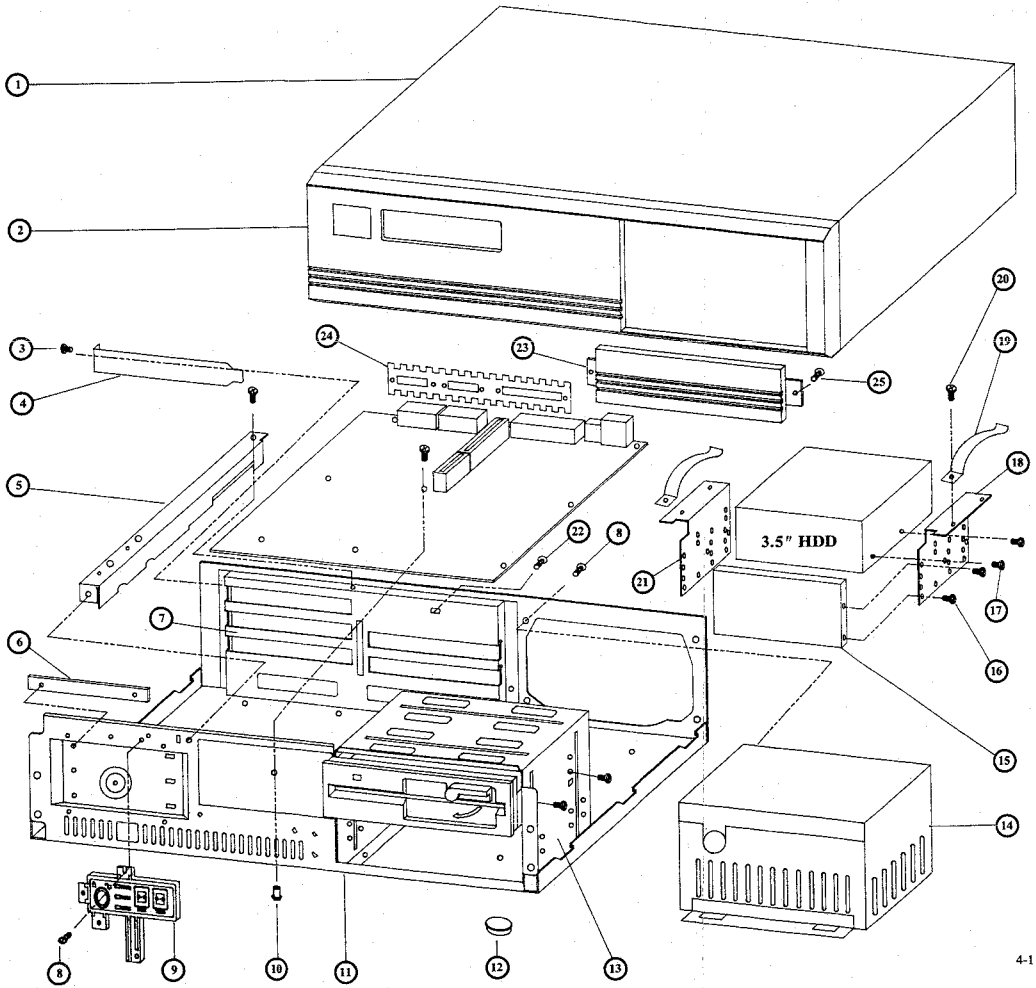
# SECTION 4

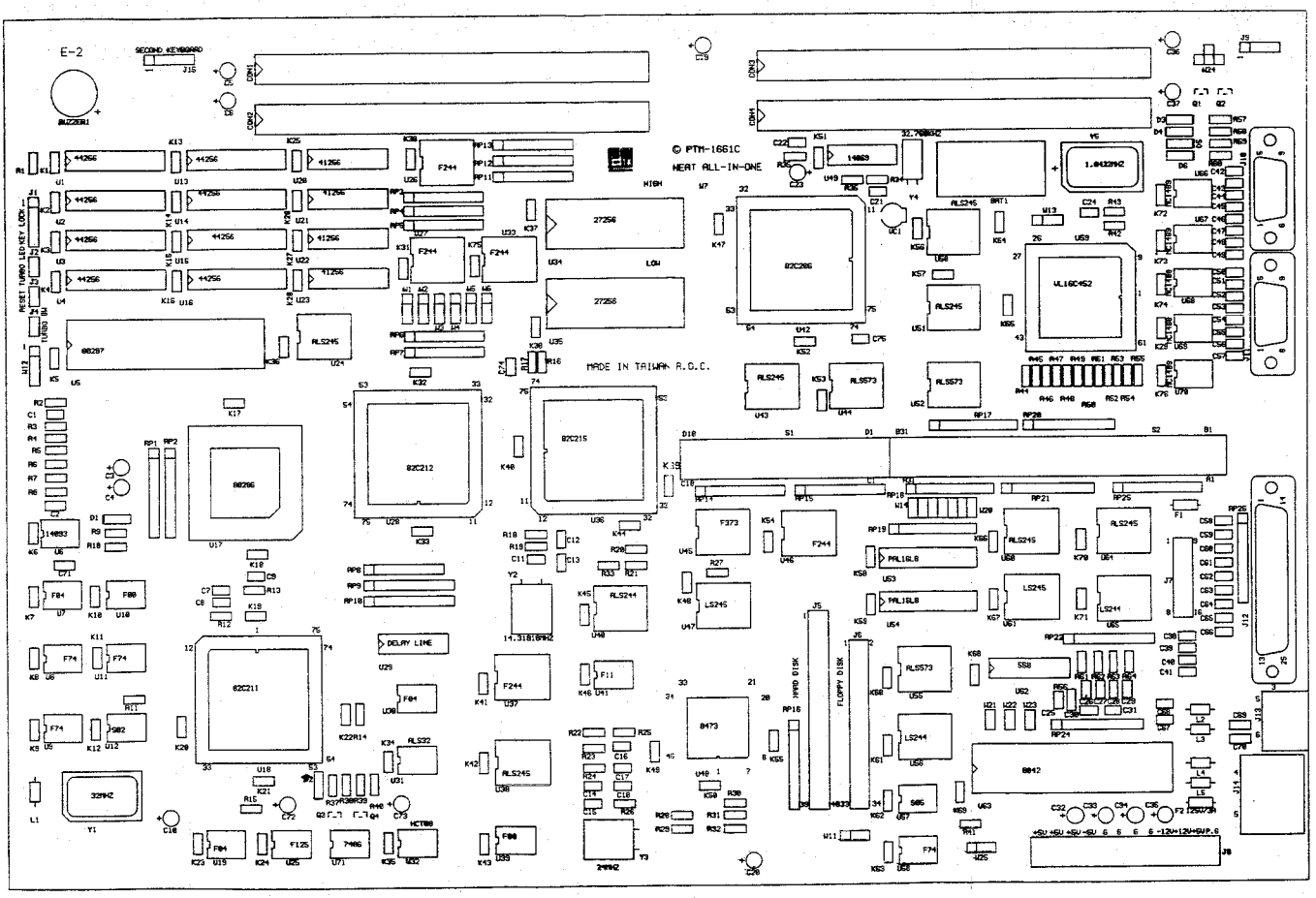
# PARTS

## SLIMLINE COMMON PARTS

| ITEM NUMBER | CBM PART NUMBER | DESCRIPTION |
|---|---|---|
| 1 | 394204-01 | Case, Top Cover Assy |
| 2 | 394202-01 | Bezel |
| 3 | 394222-01 | Screw M-3 Hex |
| 4 | 394209-01 | Adaptor Plate |
| 5 | 394210-01 | Tie Rod |
| 6 | 394211-01 | PCB Guide |
| 7 | 394212-01 | Bracket-Adaptor |
| 8 | 394221-01 | Screw #6-32X8 |
| 9 | 394213-01 | Control Panel Assy |
| 10 | 394214-01 | Stud |
| 11 | 394205-01 | Chassis |
| 12 | 394215-01 | Foot, Rubber |
| 13 | 394216-01 | Bracket, FDD - Right |
| 14 | 394217-01 | Power Supply |
| 15 | 394216-01 | Cover, HDD 3.5 |
| 16 | 390939-01 | Screw M3X8 |
| 17 | 906610-01 | Screw #6-32X5 |
| 18 | 394206-01 | Support, HDD - Right |
| 19 | 394208-01 | Spring, Cover |
| 20 | 394220-01 | Screw M3X5 |
| 21 | 394207-01 | Support, HDD - Left |
| 22 | 325542-02 | Screw M4X6 |
| 23 | 394203-01 | Cover, FDD |
| 24 | 394201-01 | Spring Plate Connector |
| 25 | 906883-02 | Screw, M3X4, Tapering |

| DESCRIPTION | SL286-16 | SL386SX-16 | SL386SX-20 |
|---|---|---|---|
| Nameplate | 312821-01 | 312821-02 | 312821-03 |
| PCB Expansion (Riser Brd) | 394219-01 | 394219-01 | 394219-01 |
| Main PCB | 390930-01 | 390916-01 | 390917-01 |
| (OEM Ref) | PTM-1661C | PPM-1660C | PPM-2060C |
| IC - Rom Hi | 390959-01 | 390915-02 | 390915-02 |
| IC - Rom Lo | 390958-01 | 390914-02 | 390914-02 |
| 1MB Simm Mem | 390698-01 | 390689-01 | 390689-01 |
| FDD 1.44MB 3.5 | 313067-05 | 313067-05 | 313067-05 |
| FDD 1.2MB 5.25 | 380825-01 | 380825-01 | 380825-01 |
| HDD 40MB/28ms | 313241-02 | 313241-02 | 313241-02 |
| HDD 50MB/19ms | 311839-01 | 311839-01 | 311839-01 |
| HDD 100MB/19ms | Not Used | 311840-01 | 311840-01 |






**390930-01 PCB ASSEMBLY SL286-16 DTK PTM1661C**

# SL286-16 PTM1661C

# Commodore International Spare Parts List
## SL286-16 SHIPPING ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country. some parts may not be available in all countries. Part Numbers are subject to change, see Parts (Section 2) of current Techtopics for current numbers.

| **286-16 US** | | |
|---|---|---|
| 522816-01 | 1M | |
| 522816-03 | 3F1.44M,3H50MB 1M | |
| 522816-04 | 3F1.44M 1M | |
| 522816-05 | 5F1.2M,3H50MB 1M | |
| 522816-07 | 3F1.44M 2M | |
| 522816-08 | 3F1.44 5F1.2M,3H50MB 1M | |
| 522816-09 | 3F1.44M 3H50MB 2M | |
| 522816-10 | 3F1.44,5F1.2M,3H50MB 2M | |
| 522816-01A | W/1M | *SHIPPED DIRECT FROM DTK |
| 522816-03A | W/1M 1.44 FDD, 50MB HDD | *SHIPPED DIRECT FROM DTK |
| 390696-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380625-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 906810-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-08 | LABEL HDD TYPE #25 (50MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366578-01 | LABEL, UPC 1M 3.5FDD | |
| 366579-01 | LABEL, UPC 1M 5.25FDD 50MB HDD | |
| 366581-01 | LABEL, UPC 2M 3.5 FDD | |
| 366582-01 | LABEL, UPC 1M 3.5 FDD 5.25 FDD 50M HDD | |
| 366583-01 | LABEL, UPC 2M 3.5FDD 50MB HDD | |
| 366584-01 | LABEL, UPC 2M 3.5FDD 5.25FDD 50MB HDD | |
| 366084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS | |
| 366170-05 | LABEL, RATING - MADE IN USA | |
| 366170-06 | LABEL, RATING - MADE IN HONG KONG (SUB FOR -05) | |
| **286-16 EUROPE** | | |
| 522818-01 | 1M | |
| 522818-03 | 3F1.44 3H50MB 1M | |
| 522818-04 | 3F1.44M 1M | |
| 522818-05 | 5F1.2M,3H50MB 1M | |
| 522818-07 | 3F1.44M 2M | |
| 522818-08 | 3F1.44M 5F1.2M, 3H50MB 1M | |
| 522818-09 | 3F1.44M 3H50MB 2M | |
| 522818-10 | 3F1.44M 5F1.2M 3H50MB 2M | |
| 522818-01A | W/1M | *AS SHIPPED FROM DTK |
| 522818-03A | W/1M 1.44 FDD 50MB HDD | *AS SHIPPED FROM DTK |
| 390696-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380625-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 906810-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-08 | LABEL HDD TYPE #25 (50MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366170-01 | LABEL, RATING - MADE IN GERMANY | |
| 366170-06 | LABEL, RATING - MADE IN USA (SUB FOR -01) | |
| **KEYBOARD SHIPPING ASSY 3.5 286-16** | | |
| 582860-01 | US | |
| 582860-02 | CN | |
| 582860-03 | UK | |
| 582860-04 | GR | |
| 582860-05 | FR | |
| 582860-06 | IT | |
| 582860-07 | SP | |
| 582860-08 | SG | |
| 582860-09 | SF | |
| 582860-10 | AL | |
| 582860-11 | NR | |
| 582860-12 | SD | |
| 582860-13 | FN | |
| 582860-14 | NE | |
| 582860-15 | DN | |
| 582860-16 | BF | |
| 582860-17 | BD | |
| 582860-18 | AL | |
| 582860-19 | CE | |
| 582860-20 | PG | |
| 363734-01 | BOX, PACKING | |
| 318172-01 | SPACER | |
| 903508-01 | CORD, POWER VDE | |

| **KEYBOARD SHIPPING ASSY 3.5 286-16** *(Continued)* | |
|---|---|
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-16 | CORD, POWER UL/CSA |
| 312795-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-03 | KEYBOARD ASSY DN |
| 312796-02 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 386078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368981-02 | OP GUIDE CBM PC PROD ENGLISH |
| 368060-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319292-01 | MANUAL BASIC 3.22 ENGLISH |
| 363291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368108-01 | OP GUIDE CBM PC PROD GERMAN |
| 368106-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | OP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363266-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368068-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | OP GUIDE CBM PC PROD ITALIAN |
| 368066-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | OP GUIDE CBM PC PROD SPANISH |
| 368067-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | OP GUIDE CBM PC PROD SWEDISH |
| 368099-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363273-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | OP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | OP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368097-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | OP GUIDE CBM PC PROD NORWEGIAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |

# Commodore International Spare Parts List
## SL286-16 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 3.5 286-16 *(Continued)* | |
|---|---|
| 318896-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |
| 318827-01 | CARD, WARRANTY CN |
| 356014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312941-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367612-01 | DISK ASSY 3.5 286-16 UTILITIES ENGLISH |
| 367611-01 | DISK ASSY 3.5 930 VGA ADAPTER UTILITIES ENGLISH |
| 317181-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ENGLISH |
| 317182-03 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ENGLISH |
| 317183-03 | DISK ASSY 3.5 MS DOS SHELL 1.01 ENGLISH |
| 317184-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL GERMAN |
| 317185-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS GERMAN |
| 317186-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 GERMAN |
| 317187-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL FRENCH |
| 317188-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS FRENCH |
| 317189-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 FRENCH |
| 317190-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ITALIAN |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ITALIAN |
| 317192-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 ITALIAN |
| 317193-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SPANISH |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SPANISH |
| 317195-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SPANISH |
| 317199-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SWEDISH |
| 317200-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SWEDISH |
| 317202-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SWEDISH |
| 317196-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL DUTCH |
| 317197-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS DUTCH |
| 317198-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 DUTCH |
| 317203-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL PORTUGUESE |
| 317204-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS PORTUGUESE |
| 317205-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 PORTUGUESE |
| **KEYBOARD SHIPPING ASSY 5.25 286-16** | |
| 582861-01 | US |
| 582861-02 | CN |
| 582861-03 | UK |
| 582861-04 | GR |
| 582861-05 | FR |
| 582861-06 | IT |
| 582861-07 | SP |
| 582861-08 | SG |
| 582861-09 | SF |
| 582861-10 | AU |
| 582861-11 | NR |
| 582861-12 | SD |
| 582861-13 | FN |
| 582861-14 | NE |
| 582861-15 | DN |
| 582861-16 | BF |
| 582861-17 | BD |
| 582861-18 | AL |
| 582861-19 | CE |
| 582861-20 | PS |
| 363724-01 | BOX, PACKING |
| 318172-01 | SPACER |
| 903508-01 | CORD, POWER VDE |
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-18 | CORD, POWER UL/CSA |
| 312796-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-03 | KEYBOARD ASSY DN |
| 312796-02 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 368078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368081-02 | OP GUIDE CBM PC PROD ENGLISH |

| KEYBOARD SHIPPING ASSY 5.25 286-16 *(Continued)* | |
|---|---|
| 368080-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319262-01 | MANUAL BASIC 3.22 ENGLISH |
| 362291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368108-01 | OP GUIDE CBM PC PROD GERMAN |
| 368106-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | OP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363268-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368088-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | OP GUIDE CBM PC PROD ITALIAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | OP GUIDE CBM PC PROD SPANISH |
| 368097-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | OP GUIDE CBM PC PROD SWEDISH |
| 368099-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363273-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | OP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | OP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368090-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | OP GUIDE CBM PC PROD NORWEGIAN |
| 368098-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |
| 318896-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |
| 318882-01 | CARD, WARRANTY CN |
| 356014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312941-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367609-01 | DISK ASSY 5.25 286-16 UTILITIES ENGLISH |
| 367606-01 | DISK ASSY 5.25 930 VGA ADAPTER UTILITIES ENGLISH |
| 317882-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL ENGLISH |
| 317883-01 | DISK ASSY 5.25 MS DOS 4.01 SELECT ENGLISH |
| 317884-01 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317885-02 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317886-03 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317887-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 ENGLISH |
| 357025-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 GERMAN |
| 357026-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 GERMAN |
| 357027-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 GERMAN |
| 357028-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 GERMAN |
| 357029-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 GERMAN |

# Commodore International Spare Parts List
## SL286-16 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 5.25 286-16 *(Continued)* | | |
|---|---|---|
| 357030-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | GERMAN |
| 357031-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | FRENCH |
| 357032-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | FRENCH |
| 357033-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | FRENCH |
| 357034-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | FRENCH |
| 357035-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | FRENCH |
| 357036-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | FRENCH |
| 317886-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | ITALIAN |
| 317888-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | ITALIAN |
| 317890-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | ITALIAN |
| 317891-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | ITALIAN |
| 317892-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | ITALIAN |
| 317893-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | ITALIAN |
| 317871-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | SPANISH |
| 317872-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | SPANISH |
| 317873-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | SPANISH |
| 317874-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | SPANISH |
| 317875-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | SPANISH |
| 317876-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | SPANISH |

| KEYBOARD SHIPPING ASSY 5.25 286-16 *(Continued)* | | |
|---|---|---|
| 317166-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | SWEDISH |
| 317169-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | SWEDISH |
| 317170-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | SWEDISH |
| 317171-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | SWEDISH |
| 317172-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | SWEDISH |
| 317173-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | SWEDISH |
| 317877-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | DUTCH |
| 317878-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | DUTCH |
| 317879-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | DUTCH |
| 317880-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | DUTCH |
| 317881-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | DUTCH |
| 317882-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | DUTCH |
| 317162-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 | PORTUGUESE |
| 317163-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 | PORTUGUESE |
| 317164-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 | PORTUGUESE |
| 317165-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 | PORTUGUESE |
| 317166-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 | PORTUGUESE |
| 317167-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 | PORTUGUESE |

# Commodore International Spare Parts List
## SL286-16 MAJOR ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

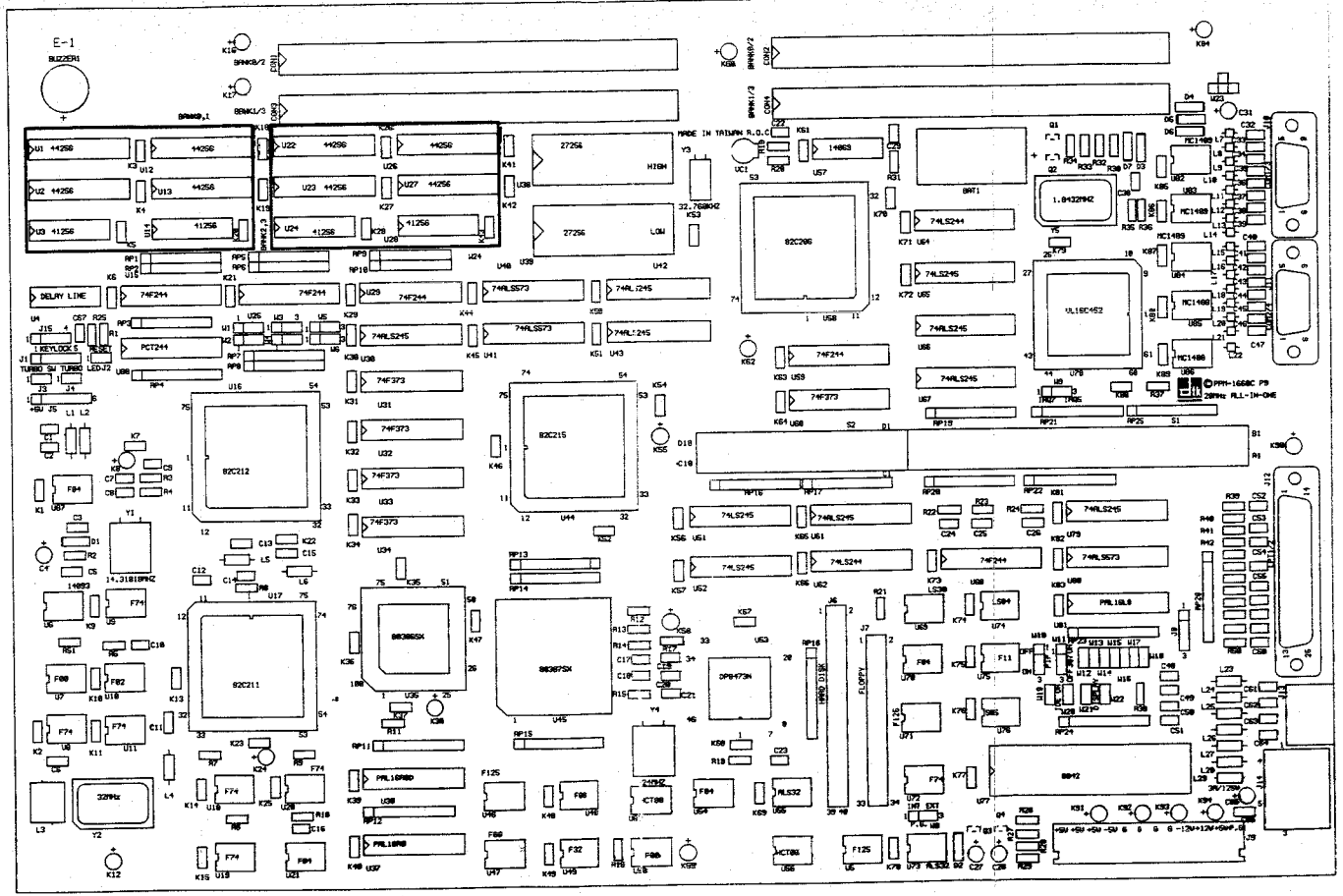
| | |
|---|---|
| 312822-01 | SLIM LINE ASSEMBLY 286-1M |
| 312822-03 | SLIM LINE ASSEMBLY 286-1M,3F1.44M,3H50MB |
| 312822-04 | SLIM LINE ASSEMBLY 286-1M,3F1.44M |
| 312822-05 | SLIM LINE ASSEMBLY 286-1M,5F1.2M,3H50MB |
| 312822-07 | SLIM LINE ASSEMBLY 286-2M,3F1.44M |
| 312822-08 | SLIM LINE ASSEMBLY 286-1M,3F1.44,5F1.2M,3H50MB |
| 312822-09 | SLIM LINE ASSEMBLY 286-2M,3F1.44M,3H50MB |
| 312822-10 | SLIM LINE ASSEMBLY 286-2M,3F1.44,3H50MB |
| 394204-01 | CASE, TOP COVER ASSY |
| 394202-01 | BEZEL |
| 394222-01 | SCREW M-3 HEX |
| 394209-01 | ADAPTER PLATE |
| 394219-01 | TIE ROD |
| 394211-01 | PCB GUIDE |
| 394212-01 | BRACKET-ADAPTER |
| 394221-01 | SCREW #6-32x8 |
| 394213-01 | CONTROL PANEL ASSY |
| 394214-01 | STUD |
| 394205-01 | CHASSIS |
| 394215-01 | FOOT, RUBBER |
| 394216-01 | BRACKET, FDD - RIGHT |
| 394217-01 | POWER SUPPLY |
| 394218-01 | COVER, HDD 3.5 |
| 390939-01 | SCREW M3X8 |
| 906610-01 | SCREW #6-32X5 |
| 394206-01 | SUPPORT, HDD - RIGHT |
| 394208-01 | SPRING, COVER |
| 394220-01 | SCREW M3X5 |
| 394207-01 | SUPPORT, HDD - LEFT |
| 325542-02 | SCREW M4X6 |
| 394203-01 | COVER, FDD |
| 394201-01 | SPRING PLATE CONNECTOR |
| 906883-02 | SCREW, M3X4, TAPERING |
| 312821-01 | LOGO (NAMEPLATE) |
| 906800-05 | SCREW M3X6 PCB MOUNT |
| 906883-05 | SCREW M3X12 BEZEL TO CASE |
| 394219-01 | PCB EXP RISER BRD |
| 390939-01 | PCB MAIN LOGIC 286-16 PTM1661C |
| 380698-01 | MEMORY BRD 1MB SIMM |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB |
| 311839-01 | DRIVE ASSY HDD 50MB 19MS |
| 390883-01 | VGA CARD |
| 906800-03 | SCREW, MACH M3X.5X.8LG FDD |
| 325090-04 | SEAL, WARRANTY |
| 394234-01 | CLIP, TOP GROUND |
| 368170-05 | LABEL, RATING UL/CSA |
| 368170-03 | LABEL, RATING VDE,BSI,SAA,SEV |
| 368170-01 | LABEL, RATING SUB FOR -05 |
| 368170-06 | LABEL, RATING SUB FOR -03 |

# Commodore International Spare Parts List
## SL286-16 PCB Components
## PCB Assembly 390930-01 (DTK PTM1661C)

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country. some parts may not be available in all countries.

| IC COMPONENTS | | |
|---|---|---|
| 390300-05 | CPU 80286 16MHZ | |
| 390559-01 | ROM HI V1.0 | |
| 390658-01 | ROM LO V1.0 | |
| 609208-01 | BUS CTRL 82C211C-16 | U18 |
| 609208-02 | MEM CTRL 82C212B-16 | U28 |
| 609208-03 | ADDR BUF 82C215 | U36 |
| 609208-04 | PER CTRL 82C206 (PLCC) | U42 |
| 609208-05 | DACE 82C452 | U59 |
| 609208-06 | 8473V (PLCC) | U48 |
| 609208-07 | TTL 74F00 (SMT) | U10,39 |
| 609208-08 | TTL 74F04 (SMT) | U7,19,30 |
| 609208-09 | TTL 74F11 (SMT) | U41 |
| 609208-10 | TTL 74F74 (SMT) | U8,9,11,58 |
| 609208-11 | TTL 74F125 (SMT) | U25 |
| 609208-12 | TTL 74F244 (SMT) | U26,27,33,37,46 |
| 609208-13 | TTL 74F373 (SMT) | U45 |
| 609208-14 | TTL 74ALS32 (SMT) | U31 |
| 609208-15 | TTL 74ALS244 (SMT) | U40 |
| 609208-16 | TTL 74ALS245 (SMT) | U24,38,43,50,51,60,64 |
| 609208-17 | TTL 74ALS573 (SMT) | U44,52,55 |
| 609208-18 | CMOS 14093 (SMT) | U6 |
| 609208-19 | TTL 74LS244 (SMT) | U56,65 |
| 609208-20 | TTL 74LS245 (SMT) | U47,61 |
| 609208-21 | TTL 74S02 (SMT) | U12 |
| 609208-22 | TTL 74S05 (SMT) | U57 |
| 609208-23 | CMOS 74HCT08 (SMT) | U32 |
| 609208-24 | 1488 (SMT) | U68,69 |
| 609208-25 | 1489 (SMT) | U66,67,70 |
| 609208-26 | TTL 74LS86 (SMT) | U71 |
| **RESISTOR CHIPS** | | |
| 609208-27 | 33 OHM 1/8W J 3216 | R2,3,12,13,16,17,21,10, 33,43 |
| 609208-28 | 10K 1/8W J 3216 | R4,6,8,15,22,27,37,38, 39,56,57,58 |
| 609208-29 | 510 OHM 1/8W J 3216 | R60 |
| 609208-30 | 22M 1/8W J 3216 | R36 |
| 609208-31 | 51K 1/8W J 3216 | R59 |
| 609208-32 | 1K 1/8W J 3216 | R9,23,28,29,32,35 |
| 609208-33 | 2M 1/8W J 3216 | R34 |
| 609208-34 | 1M 1/8W J 3216 | R19 |
| 609208-35 | 10 OHM 1/8W J 3216 | R18 |
| 609208-36 | 330 OHM 1/8W J 3216 | R11,20,30 |
| 609208-37 | 2.2K 1/8W J 3216 | R25,61-64 |
| 609208-38 | 620 OHM 1/8W J 3216 | R14 |
| 609208-39 | 51 OHM 1/8W J 3216 | R31 |
| 609208-40 | 220 OHM 1/8W J 3216 | R1,42 |
| 609208-41 | 560 OHM 1/8W J 3216 | R24 |
| 609208-42 | 5.6K 1/8W J 3216 | R26 |
| 609208-43 | 150 OHM 1/8W J 3216 | R5 |
| 609208-44 | 100K 1/8W J 3216 | R7 |
| 609208-45 | 470 OHM 1/8W J 3216 | R41 |
| 609208-46 | 27 OHM 1/8W J 3216 | R44-55 |
| 609208-47 | 30K 1/8W J 3216 | R40 |
| **CAPACITOR CHIPS** | | |
| 609208-48 | 472PK 50V X7R 2012 | C22 |
| 609208-49 | 22PJ 50V NPO 2012 | C8,9,21 |
| 609208-50 | 47PJ 50V NPO 2012 | C11,30,31,38-41,74 |
| 609208-51 | 10PJ 50V NPO 2012 | C12,13,17,18,24 |
| 609208-52 | 27PJ 50V NPO 2012 | C1 |
| 609208-53 | 102PK 50V X7R 2012 | C14 |
| 609208-54 | 333PK 50V X7R 2012 | C16 |
| 609208-55 | 473PK 25V X7R 2012 | C7,15 |

| CAPACITOR CHIPS (Continued) | | |
|---|---|---|
| 609208-56 | 101PJ 50V NPO 2012 | C42-57,67,68 |
| 609208-57 | 222PK 50V X7R 2012 | C58-66 |
| 609208-58 | 104PZ 50V Y5V 3216 | C2,69-71,K1-76 |
| 609208-59 | 103PK 50V X7R 2012 | C25-29 |
| **TRANSISTORS AND DIODES** | | |
| 609208-60 | TR 2N3904 (SMT) | Q2,4 |
| 609208-61 | TR 2N3906 (SMT) | Q1,3 |
| 609208-62 | DIODE FAST 1N4148 (SMT) | D1-6 |
| **MISCELLANEOUS** | | |
| 609208-63 | IC 8742 | U63 |
| 609208-64 | LABEL KB2002 DTK | U63 |
| 609208-65 | IC CMOS 4069 | U49 |
| 609208-66 | IC 558 | U62 |
| 609208-67 | RES SIP 4.7K 9P | RP2,9,26 |
| 609208-68 | RES SIP 10K 9P 1/8W | RP10,14,15,17-21,24,25 |
| 609208-69 | RES SIP 1K 9P 1/8W | R1,22 |
| 609208-70 | RES SIP-33 OHM 8P 1/8W | RP3-8,11-13 |
| 609208-71 | RES SIP 150 OHM 9P | RP16 |
| 609208-72 | CAP CER 56 PK 50V 5MM SL | |
| 609208-73 | CAP TA 10 UF 25V 2.5MM | C23,34,35 |
| 609208-74 | CAP TA 10 UF 16V-2.5MM ± 20% | C3,5,6,10,19,20,32,33, 36,37 |
| 609208-75 | CAP TA 2.2 UF 16V 2.5MM ± 20% | C4,73 |
| 609208-76 | CAP TA 22 UF 16V 2.5MM | C72 |
| 609208-77 | SOCKET PLCC 68P | U17 |
| 609208-78 | SOCKET 40P (SH) | U5,63 |
| 609208-79 | SOCKET 28P (SH) | U34,36 |
| 609208-80 | SOCKET 20P (SK) | U1-4,13,16 |
| 609208-81 | SOCKET 16P (SK) | U20-23 |
| 609208-82 | BATTERY ROUND 3.6V | BAT |
| 609208-83 | VC 30P | VC1 |
| 609208-84 | BUZZER | BUZZER1 |
| 609208-85 | XTAL 32.768 MHZ | Y4 |
| 609208-86 | XTAL 14.318 MHZ | Y2 |
| 609208-87 | XTAL 24 MHZ | Y3 |
| 609208-88 | DELAY LINE 05075 | U29 |
| 609208-89 | OSC 1.8432 MHZ (TTL) | Y5 |
| 609208-90 | OSC 32 MHZ (TTL) | Y1 |
| 609208-91 | PIN HEADER 1*4 | J9,W12 |
| 609208-92 | PIN HEADER 1*5 | J1,J15 |
| 609208-93 | PS/2 MOUSE CONN 6P | J13 |
| 609208-94 | K/B CONNECTOR 5P | J14 |
| 609208-95 | POWER CONN 12P | J8 |
| 609208-96 | MICRO FUSE 3A/125V | F1,F2 |
| 609208-97 | SLOT 62P (0.8MM) | S2 |
| 609208-98 | SLOT 36P (0.8MM) | S1 |
| 609208-99 | PIN HEADER 1*3 | W1-5,11,13,24,25 |
| 609209-01 | PIN HEADER 2*7 | W14-20 |
| 609209-02 | PIN HEADER 2*8 | J7 |
| 609209-03 | PIN HEADER 2*17 | J6 |
| 609209-04 | PIN HEADER 2*20 | J5 |
| 609209-05 | CONN D TYPE 9P (M) | J10,11 |
| 609209-06 | CONN D TYPE 25P (F) | J12 |
| 609209-07 | CONN SIMM 1*30 (BLACK) | CON1-4 |
| 609209-08 | FERRITE BEAD 3.5*4.7*0.8 P10MM | L1-5 |
| 609209-09 | JUMPER 1*2 | W1-6,11,13-25 |
| 609209-10 | JUMP WIRE 5*10MM | Y4 |
| 609209-11 | IC PAL PRG PTM-1661C-53 | U53 |
| 609209-12 | IC GAL 16V8-20 | |
| 609209-13 | IC PAL PRG PTM-1661C-54 | U54 |
| 609209-14 | IC GAL 16V8-20 | |



390916-01 PCB ASSEMBLY SL386SX-16 DTK PPM1660C

# SL386SX-16 PPM1660C

# Commodore International Spare Parts List
## SL386SX-16 SHIPPING ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries. Part Numbers are subject to change, see Parts (Section 2) of current Techtopics for current numbers.

| 386SX-16 US | | |
|---|---|---|
| 523816-01 | 1M | |
| 523816-02 | 3F1.44M,3H40MB 1M | |
| 523816-03 | 3F1.44M,3H50MB 1M | |
| 523816-04 | 3F1.44M 1M | |
| 523816-05 | 5F1.2M,3H40MB 1M | |
| 523816-06 | 3F1.44,3H40MB 1M | |
| 523816-07 | 3F1.44M 2M | |
| 523816-08 | 3F1.44 5F1.2M,3H50MB 1M | |
| 523816-09 | 3F1.44M 3H50MB 2M | |
| 523816-10 | 3F1.44,5F1.2M,3H50MB 2M | |
| 523816-11 | 3F1.44M,3H100MB 2M | |
| 523816-01A | W/1M | *SHIPPED DIRECT FROM DTK |
| 523816-02A | W/1M 1.44 FDD, 40MB HDD | *SHIPPED DIRECT FROM DTK |
| 523816-03A | W/1M 1.44 FDD, 50MB HDD | *SHIPPED DIRECT FROM DTK |
| 390698-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 313241-02 | DRIVE ASSY HDD 40MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 311840-01 | DRIVE ASSY HDD 100MB | |
| 906610-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-05 | LABEL HDD TYPE #17 (40MB) | |
| 316585-06 | LABEL HDD TYPE #26 (50MB) | |
| 316585-09 | LABEL HDD TYPE #27 (100MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366588-01 | LABEL, UPC 1M 3.5FDD | |
| 366589-01 | LABEL, UPC 1M 5.25FDD 40MB HDD | |
| 366590-01 | LABEL, UPC 1M 3.5FDD 40MB FDD | |
| 366591-01 | LABEL, UPC 2M 3.5 FDD | |
| 366592-01 | LABEL, UPC 1M 3.5 FDD 5.25 FDD 50M HDD | |
| 366593-01 | LABEL, UPC 2M 3.5FDD 50MB HDD | |
| 366594-01 | LABEL, UPC 2M 3.5FDD 5.25FDD 50MB HDD | |
| 366595-01 | LABEL, UPC 1M 3.5FDD 100MB HDD | |
| 366084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS | |
| 366560-02 | LABEL, RATING - MADE IN USA | |
| 366560-03 | LABEL, RATING - MADE IN HONG KONG (SUB FOR -02) | |

| 386SX-16 EUROPE | | |
|---|---|---|
| 523818-01 | 1M | |
| 523818-02 | 3F1.44 3H40MB 1M | |
| 523818-03 | 3F1.44 3H50MB 1M | |
| 523818-04 | 3F1.44M 1M | |
| 523818-05 | 3H40MB 1M | |
| 523818-06 | 3F1.44 5F1.2M 3H40MB 1M | |
| 523818-07 | 3F1.44M 2M | |
| 523818-08 | 3F1.44M 5F1.2M, 3H50MB 1M | |
| 523818-09 | 3F1.44M 3H50MB 2M | |
| 523818-10 | 3F1.44M 5F1.2M 3H50MB 2M | |
| 523818-11 | 3H100MB 1M | |
| 523818-01A | W/1M | *AS SHIPPED FROM DTK |
| 523818-02A | W/1M 1.44 FDD 40MB HDD | *AS SHIPPED FROM DTK |
| 523818-03A | W/1M 1.44 FDD 50MB HDD | *AS SHIPPED FROM DTK |
| 390698-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 313241-02 | DRIVE ASSY HDD 40MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 311840-01 | DRIVE ASSY HDD 100MB | |
| 906610-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-05 | LABEL HDD TYPE #17 (40MB) | |
| 316585-06 | LABEL HDD TYPE #26 (50MB) | |
| 316585-09 | LABEL HDD TYPE #27 (100MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366590-04 | LABEL, RATING - MADE IN GERMANY | |
| 366560-06 | LABEL, RATING - MADE IN USA (SUB FOR -04) | |

| KEYBOARD SHIPPING ASSY 3.5 386SX-16 | |
|---|---|
| 583861-01 | US |
| 583861-02 | CN |
| 583861-03 | UK |
| 583861-04 | GR |
| 583861-05 | FR |

| KEYBOARD SHIPPING ASSY 3.5 386SX-16 (Continued) | |
|---|---|
| 583861-06 | IT |
| 583861-07 | SP |
| 583861-08 | SG |
| 583861-09 | SF |
| 583861-10 | AU |
| 583861-11 | NR |
| 583861-12 | SD |
| 583861-13 | PN |
| 583861-14 | ME |
| 583861-15 | DN |
| 583861-16 | BF |
| 583861-17 | BD |
| 583861-18 | AL |
| 583861-19 | CE |
| 583861-20 | PG |
| 353734-01 | BOX, PACKING |
| 318172-01 | SPACER |
| 903508-01 | CORD, POWER VDE |
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-18 | CORD, POWER UL/CSA |
| 312796-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-02 | KEYBOARD ASSY DN |
| 312796-00 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 368078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368081-02 | OP GUIDE CBM PC PROD ENGLISH |
| 368080-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319292-01 | MANUAL BASIC 3.22 ENGLISH |
| 363291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368108-01 | OP GUIDE CBM PC PROD GERMAN |
| 368105-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | OP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363268-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368098-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | OP GUIDE CBM PC PROD ITALIAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | OP GUIDE CBM PC PROD SPANISH |
| 368097-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | OP GUIDE CBM PC PROD SWEDISH |
| 368099-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363273-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | OP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |

# Commodore International Spare Parts List
## SL386SX-16 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 3.5 386SX-16 *(Continued)* | |
|---|---|
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | OP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368090-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | OP GUIDE CBM PC PROD NORWEGIAN |
| 368098-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |
| 318896-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |
| 318882-01 | CARD, WARRANTY CN |
| 368014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312341-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367510-01 | DISK ASSY 3.5 386SX-16/20 UTILITIES ENGLISH |
| 367511-01 | DISK ASSY 3.5 930 VGA ADAPTER UTILITIES ENGLISH |
| 317181-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ENGLISH |
| 317182-03 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ENGLISH |
| 317183-03 | DISK ASSY 3.5 MS DOS SHELL 1.01 ENGLISH |
| 317184-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL GERMAN |
| 317185-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS GERMAN |
| 317186-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 GERMAN |
| 317187-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL FRENCH |
| 317188-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS FRENCH |
| 317189-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 FRENCH |
| 317190-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ITALIAN |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ITALIAN |
| 317192-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 ITALIAN |
| 317193-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SPANISH |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SPANISH |
| 317195-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SPANISH |
| 317199-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SWEDISH |
| 317200-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SWEDISH |
| 317202-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SWEDISH |
| 317196-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL DUTCH |
| 317197-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS DUTCH |
| 317198-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 DUTCH |
| 317203-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL PORTUGUESE |
| 317204-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS PORTUGUESE |
| 317205-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 PORTUGUESE |

| KEYBOARD SHIPPING ASSY 5.25 386SX-16 | |
|---|---|
| 583860-01 | US |
| 583860-02 | CN |
| 583860-03 | UK |
| 583860-04 | GR |
| 583860-05 | FR |
| 583860-06 | IT |
| 583860-07 | SP |
| 583860-08 | SG |
| 583860-09 | SF |
| 583860-10 | AU |
| 583860-11 | NR |
| 583860-12 | SD |
| 583860-13 | FN |
| 583860-14 | NE |
| 583860-15 | DN |
| 583860-16 | SF |
| 583860-17 | BD |
| 583860-18 | AL |
| 583860-19 | CE |
| 583860-20 | PO |
| 363734-01 | BOX, PACKING |
| 318172-01 | SPACER |
| 903508-01 | CORD, POWER VDE |

| KEYBOARD SHIPPING ASSY 5.25 386SX-16 *(Continued)* | |
|---|---|
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-18 | CORD, POWER UL/CSA |
| 312796-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-03 | KEYBOARD ASSY DN |
| 312796-02 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 368078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368081-02 | OP GUIDE CBM PC PROD ENGLISH |
| 368083-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319292-01 | MANUAL BASIC 3.22 ENGLISH |
| 363291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368106-01 | OP GUIDE CBM PC PROD GERMAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | OP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363268-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368088-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | OP GUIDE CBM PC PROD ITALIAN |
| 368086-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | OP GUIDE CBM PC PROD SPANISH |
| 368097-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | OP GUIDE CBM PC PROD SWEDISH |
| 368099-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363272-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | OP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | OP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368090-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | OP GUIDE CBM PC PROD NORWEGIAN |
| 368098-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |
| 318896-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |

# Commodore International Spare Parts List
## SL386SX-16 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 5.25 386SX-16 *(Continued)* | |
|---|---|
| 318862-01 | CARD, WARRANTY CN |
| 358014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312341-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367607-01 | DISK ASSY 5.25 386SX-16/20 UTILITIES ENGLISH |
| 367608-01 | DISK ASSY 5.25 930 VGA ADAPTER UTILITIES ENGLISH |
| 317882-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL ENGLISH |
| 317883-01 | DISK ASSY 5.25 MS DOS 4.01 SELECT ENGLISH |
| 317884-01 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317885-02 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317886-03 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317887-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 ENGLISH |
| 367025-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 GERMAN |
| 367025-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 GERMAN |
| 367027-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 GERMAN |
| 367028-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 GERMAN |
| 367029-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 GERMAN |
| 367030-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 GERMAN |
| 367031-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 FRENCH |
| 367032-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 FRENCH |
| 367033-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 FRENCH |
| 367034-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 FRENCH |
| 367035-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 FRENCH |
| 367036-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 FRENCH |
| 317889-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 ITALIAN |
| 317889-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 ITALIAN |
| 317890-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 ITALIAN |

| KEYBOARD SHIPPING ASSY 5.25 386SX-16 (Continued) | |
|---|---|
| 317891-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 ITALIAN |
| 317892-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 ITALIAN |
| 317893-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 ITALIAN |
| 317871-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 SPANISH |
| 317872-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 SPANISH |
| 317873-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 SPANISH |
| 317874-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 SPANISH |
| 317875-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 SPANISH |
| 317876-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 SPANISH |
| 317168-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 SWEDISH |
| 317169-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 SWEDISH |
| 317170-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 SWEDISH |
| 317171-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 SWEDISH |
| 317172-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 SWEDISH |
| 317173-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 SWEDISH |
| 317877-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 DUTCH |
| 317878-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 DUTCH |
| 317879-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 DUTCH |
| 317880-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 DUTCH |
| 317881-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 DUTCH |
| 317882-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 DUTCH |
| 317162-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 PORTUGUESE |
| 317163-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 PORTUGUESE |
| 317164-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 PORTUGUESE |
| 317165-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 PORTUGUESE |
| 317165-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 PORTUGUESE |
| 317167-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 PORTUGUESE |

# Commodore International Spare Parts List
## SL386SX-16 MAJOR ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

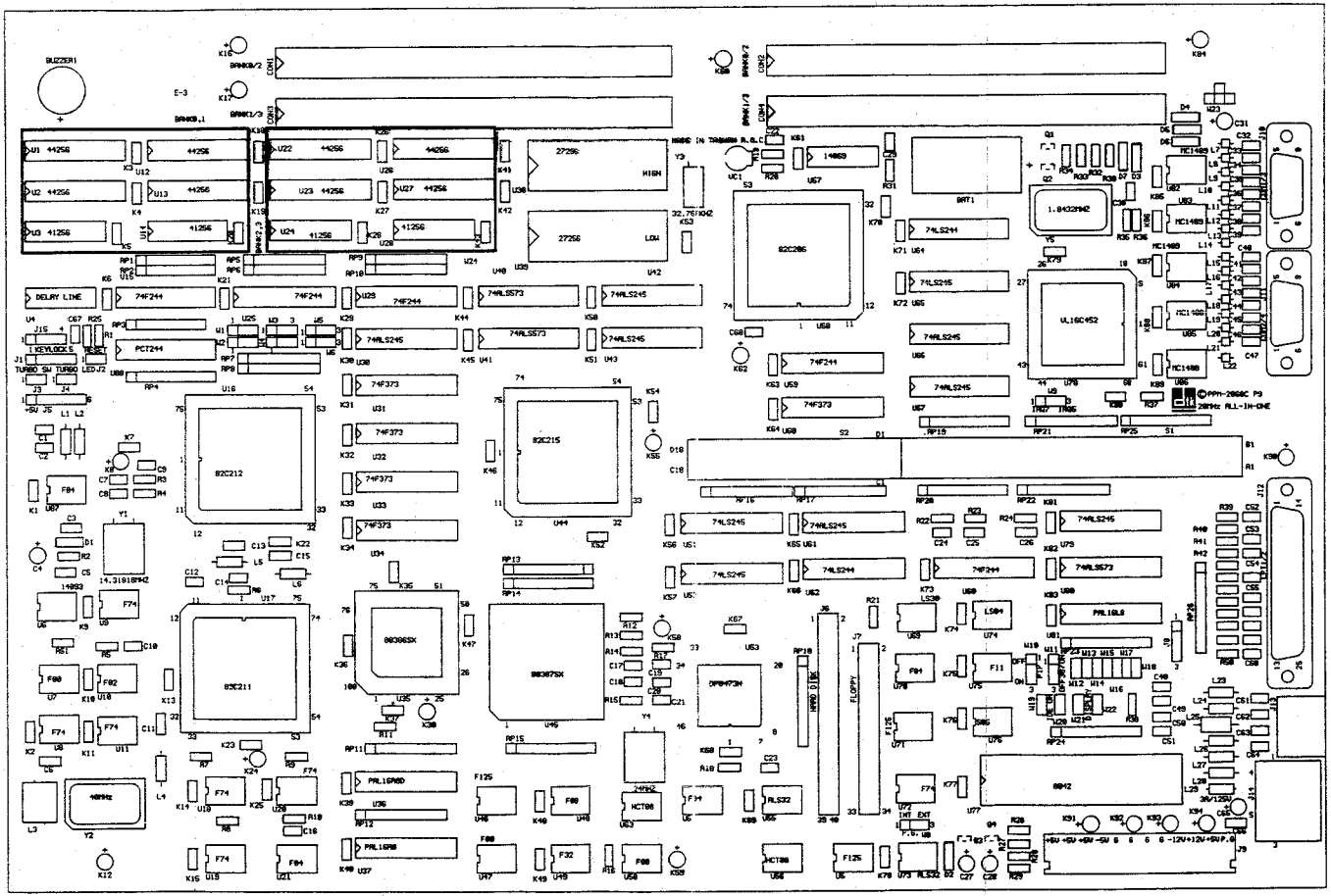
| | |
|---|---|
| 312823-01 | SLIM LINE ASSEMBLY 386SX-1M |
| 312823-02 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M 3H40MB |
| 312823-03 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M,3H50MB |
| 312823-04 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M |
| 312823-05 | SLIM LINE ASSEMBLY 386SX-1M,5F1.2M,3H40MB |
| 312823-06 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M,5F1.20M,3H40MB |
| 312823-07 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M |
| 312823-08 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44,5F1.2M,3H50MB |
| 312823-09 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M,3H50MB |
| 312823-10 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44,5F1.2M,3H50MB |
| 312823-11 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M,3H100MB |
| 394204-01 | CASE, TOP COVER ASSY |
| 394202-01 | BEZEL |
| 394222-01 | SCREW M-3 HEX |
| 394209-01 | ADAPTER PLATE |
| 394210-01 | TIE ROD |
| 394211-01 | PCB GUIDE |
| 394212-01 | BRACKET-ADAPTER |
| 394221-01 | SCREW #6-32x6 |
| 394213-01 | CONTROL PANEL ASSY |
| 394214-01 | STUD |
| 394205-01 | CHASSIS |
| 394215-01 | FOOT, RUBBER |
| 394215-01 | BRACKET, FDD - RIGHT |
| 394217-01 | POWER SUPPLY |
| 394218-01 | COVER, HDD 3.5 |
| 390939-01 | SCREW M3X8 |
| 906610-01 | SCREW #6-32X5 |
| 394206-01 | SUPPORT, HDD - RIGHT |
| 394208-01 | SPRING, COVER |
| 394220-01 | SCREW M3X5 |
| 394207-01 | SUPPORT, HDD - LEFT |
| 325542-02 | SCREW M4X8 |
| 394203-01 | COVER, FDD |
| 394201-01 | SPRING PLATE CONNECTOR |
| 906883-02 | SCREW, M3X4, TAPERING |
| 312821-02 | LOGO (NAMEPLATE) |
| 906800-05 | SCREW M3X6 PCB MOUNT |
| 906883-05 | SCREW M3X12 BEZEL TO CASE |
| 394219-01 | PCB EXP RISER BRD |
| 390916-01 | PCB MAIN LOGIC 386SX-16 PPM1660C |
| 390698-01 | MEMORY BRD 1MB SIMM |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB |
| 312241-02 | DRIVE ASSY HDD 40MB 28MS |
| 311839-01 | DRIVE ASSY HDD 50MB 19MS |
| 390883-01 | VGA CARD |
| 311840-01 | DRIVE ASSY HDD 100MB 19MS |
| 906800-03 | SCREW, MACH M3X.5X.8LG FDD |
| 325090-04 | SEAL, WARRANTY |
| 394234-01 | CLIP, TOP GROUND |
| 366560-02 | LABEL, RATING UL/CSA |
| 366560-04 | LABEL, RATING VDE,BSI,SAA,SEV |
| 366560-03 | LABEL, RATING SUB FOR -02 |
| 366560-06 | LABEL, RATING SUB FOR -04 |

# Commodore International Spare Parts List
## SL386SX-16 PCB Components
## PCB Assembly #390916-01 (DTK PPM1660C)

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

| IC COMPONENTS | | |
|---|---|---|
| 390933-01 | CPU 80386SX-16 | U35 |
| 390015-02 | ROM HI V1.01 | |
| 390014-02 | ROM LO V1.01 | |
| 609206-01 | PER CTRL 82C206 | U58 |
| 609206-02 | 82C211G-16 | U17 |
| 609206-03 | 82C212B-16 | U16 |
| 609206-04 | ADDRESS BUFFER 82C215 | U44 |
| 609206-05 | 8473V (PLCC) | U53 |
| 609206-06 | DACE 82C452 | U78 |
| 609206-07 | CMOS 4093 | U8 |
| 609206-08 | 1488 (SMT) | U85,86 |
| 609206-09 | 1489 (SMT) | U82,84 |
| 609206-10 | TTL 74ALS32 (SMT) | U55,73 |
| 609206-11 | CMOS 74HCT08 (SMT) | U56,63 |
| 609206-12 | TTL 74F00 (SMT) | U7,50 |
| 609206-13 | TTL 74F04 (SMT) | U54,70 |
| 609206-14 | TTL 74F08 (SMT) | U47,48 |
| 609206-15 | TTL 74F11 (SMT) | U75 |
| 609206-16 | TTL 74F32 | U49 |
| 609206-17 | TTL 74F32 (SMT) | U6,9,11,19-20,72 |
| 609206-18 | TTL 74F125 (SMT) | U5,46,71 |
| 609206-19 | TTL 74F02 (SMT) | U10 |
| 609206-20 | TTL 74S05 (SMT) | U76 |
| 609206-21 | TTL 74LS04 (SMT) | U74 |
| 609206-22 | TTL 74LS30 (SMT) | U69 |
| 609206-23 | CMOS 74ACT04 (SMT) | U21 |
| **RESISTOR CHIPS** | | |
| 609206-24 | 10 OHM 1/8W J 3216 | R4,6 |
| 609206-25 | 27 OHM 1/8W J 3216 | R39-50 |
| 609206-26 | 33 OHM 1/8W J 3216 | R5,8,10,22-24,35 |
| 609206-27 | 51 OHM 1/8W J 3216 | R14 |
| 609206-28 | 150 OHM 1/8W J 3216 | R16 |
| 609206-29 | 220 OHM 1/8W J 3216 | R1,36 |
| 609206-30 | 330 OHM 1/8W J 3216 | R7,12,37 |
| 609206-31 | 470 OHM 1/8W J 3216 | R25 |
| 609206-32 | 510 OHM 1/8W J 3216 | R30 |
| 609206-33 | 560 OHM 1/8W J 3216 | R15 |
| 609206-34 | 620 OHM 1/8W J 3216 | R21 |
| 609206-35 | 1K 1/8W J 3216 | R11,13,31,51 |
| 609206-36 | 5.6K 1/8W J 3216 | R18 |
| 609206-37 | 2.2K 1/8W J 3216 | R9 |
| 609206-38 | 10K 1/8W J 3216 | R17,27-29,32,34,38 |
| 609206-39 | 33K 1/8W J 3216 | R26 |
| 609206-40 | 51K 1/8W J 3216 | R33 |
| 609206-41 | 100K 1/8W J 3216 | R2 |
| 609206-42 | 1M 1/8W J 3216 | R3 |
| 609206-43 | 2M 1/8W J 3216 | R19 |
| 609206-44 | 22M 1/8W J 3216 | R20 |
| **CAPACITOR CHIPS** | | |
| 609206-45 | 10PJ 50V NPO 2012 | C8,9,19,20,30 |
| 609206-46 | 22PJ 50V NPO 2012 | C10,14,16,22 |
| 609206-47 | 27PJ 50V NPO 2012 | C24 |
| 609206-48 | 47PJ 50V NPO 2012 | C7,61-64 |
| 609206-49 | 101PJ 50V NPO 2012 | C12,32-39,40-47 |
| 609206-50 | 102PK 50V X7R 2012 | C17 |
| 609206-51 | 104PZ 50V Y5V 3216 | K1-7,9-11,13-15,18-23, 25-37,39-54,56,57,61,63-83,85-89,C3,5,6,66 |
| 609206-52 | 201PJ 50V NPO 2012 | C67 |
| 609206-53 | 221PJ 50V NPO 2012 | C48-51 |
| 609206-54 | 222PK 50V X7R 2012 | C52-60 |
| 609206-55 | 333PK 50V X7R 2012 | C18 |
| 609206-56 | 472PK 50V X7R 2012 | C29 |
| 609206-57 | 473PK 25V X7R 2012 | C21 |

| TRANSISTORS AND DIODES | | |
|---|---|---|
| 609206-58 | TR 2N3904 (SMT) | Q2,3 |
| 609206-59 | TR 2N3906 (SMT) | Q1,4 |
| 609206-60 | DIODE FAST IN4148 (SMT) | D1-7 |
| **MISCELLANEOUS** | | |
| 609206-61 | IC CMOS 4069 | U57 |
| 609206-62 | IC 8742 | U77 |
| 609206-63 | LABEL KB2002 DTK | U77 |
| 609206-64 | IC TTL 74F244 | U15,25,29,59,66 |
| 609206-65 | IC CMOS 74HCT244 | U88 |
| 609206-66 | IC TTL 74F373 | U31-34,60 |
| 609206-67 | IC TTL 74ALS245 | U30,42,43,61,56,57,79 |
| 609206-68 | IC TTL 74ALS573 | U40,41,80 |
| 609206-69 | IC TTL 74LS244 | U52,54 |
| 609206-70 | IC TTL 74LS245 | U51,52,55 |
| 609206-80 | RES SIP 1K 8P | RP13 |
| 609206-81 | RES SIP 10K 9P 1/8W | RP11,12,16,17,19-25 |
| 609206-82 | RES SIP-3 33 OHM 8P 1/8W | RP1,3,5-10 |
| 609206-83 | RES SIP 150 OHM 9P | RP18 |
| 609206-84 | RES SIP 4.7K 9P | RP4,14,15,26 |
| 609206-85 | CAP CER 56PK 50V 5MM SL | NO REF DESIGNATED |
| 609206-86 | CAP TANT 2.2UF 16V 2.5MM ± 20% | C4,27 |
| 609206-87 | CAP TANT 10UF 16V 2.5MM ± 20% | C65,K8,12,16,17,24,38, 55,58-60,62,84,90 |
| 609206-88 | CAP TANT 220F 16V 2.5MM | C26 |
| 609206-89 | CAP TANT 100F 25V 2.5MM | C31,91-94 |
| 609206-90 | FERRITE BEAD 6*10 1.5T 6 HOLE | L3,25 |
| 609206-91 | VC 30P | VC1 |
| 609206-92 | DELAY LINE 05075 | U4 |
| 609206-93 | OSC 1.8432 MHZ TTL | Y5 |
| 609206-94 | OSC 32 MHZ TTL | Y2 |
| 609206-95 | XTAL 14.318 MHZ | Y1 |
| 609206-96 | XTAL 24 MHZ | Y4 |
| 609206-97 | XTAL 32.768 MHZ | Y3 |
| 609206-98 | BATTERY ROUND 3.6V | BAT1 |
| 609206-99 | FERRRITE BEAD 3.5*4.7* 0.8 P10MM | L4-5,23,24,26-28 |
| 609207-01 | BUZZER | BUZZER 1 |
| 609207-02 | JUMPER 1*2 | W1-5,8,9,11-18,20,22,23 |
| 609207-03 | CONN SIMM 1*30 BLACK | CON 1-4 |
| 609207-04 | CONN D TYPE 9P | J10,11 |
| 609207-05 | CONN D TYPE 25P | J12 |
| 609207-06 | P/S MOUSE CONN 6P | J13 |
| 609207-07 | K/B CONN 5P METAL | J14 |
| 609207-08 | POWER CONN 12P | J9 |
| 609207-09 | MICRO FUSE 3A/125V | L29 |
| 609207-10 | SLOT 36P 0.98MM | S2 |
| 609207-11 | SLOT 62P (0.8MM) | S1 |
| 609207-12 | SOCKET 16P SK | U3,14,24,28 |
| 609207-13 | SOCKET 20P SK | U1,2,12,13,22,23,26,27, 36,37,81 |
| 609207-14 | SOCKET 28P SH | U39,40 |
| 609207-15 | SOCKET 40P SH | U77 |
| 609207-16 | SOCKET PLCC 68P | U45 |
| 609207-17 | PIN HEADER 1*2 | W20,22,J2-4 |
| 609207-18 | PIN HEADER 1*3 | W1-6,8,9,11,23 |
| 609207-19 | PIN HEADER 1*4 | J5,15 |
| 609207-20 | PIN HEADER 1*5 | J1 |
| 609207-21 | PIN HEADER 2*7 | W12-18 |
| 609207-22 | PIN HEADER 2*17 | J7 |
| 609207-23 | PIN HEADER 2*20 | J6 |
| 609207-24 | JUMP WIRE 5*10MM | Y3 |
| 609207-25 | IC PAL PRG PPM-1660C-36 | U36 |
| 609207-26 | IC PAL PRG PPM-1660C-37-1 | U37 |
| 609207-27 | IC PAL PRG PPM-1660C-81 | U81 |



**390917-01 PCB ASSEMBLY SL386SX-20 DTK PPM2060C**

# SL386SX-20 PPM2060C

# Commodore International Spare Parts List
## SL386SX-20 SHIPPING ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries. Part Numbers are subject to change, see Parts (Section 2) of current Techtopics for current numbers.

| 386SX-20 US | | |
|---|---|---|
| 523819-01 | 1M | |
| 523819-02 | 3F1.44M,3H50MB 1M | |
| 523819-04 | 3F1.44M 3H50MB 2M | |
| 523819-05 | 3H50MB 2M | |
| 523819-06 | 3F1.44 5F1.44,3H50MB 2M | |
| 523819-07 | 3F1.44M 1M | |
| 523819-08 | 3F1.44,3H40MB 1M | |
| 523819-09 | 3F1.44M 3H100MB 1M | |
| 523819-01A | W/1M | *SHIPPED DIRECT FROM DTK |
| 523819-02A | W/1M 1.44FDD, 50MB HDD | *SHIPPED DIRECT FROM DTK |
| 390698-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 313241-02 | DRIVE ASSY HDD 40MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 311840-01 | DRIVE ASSY HDD 100MB | |
| 906610-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-05 | LABEL HDD TYPE #17 (40MB) | |
| 316585-06 | LABEL HDD TYPE #26 (50MB) | |
| 316585-09 | LABEL HDD TYPE #27 (100MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366598-01 | LABEL, UPC USED ON 2M, 3.5FDD 50MB HDD | |
| 366599-01 | LABEL, UPC USED ON 2M 50MB HDD | |
| 366600-01 | LABEL, UPC USED ON 2M 3.5FDD 5.25FDD 50MB HDD | |
| 366601-01 | LABEL, UPC USED ON 1M 3.5FDD | |
| 366602-01 | LABEL, UPC USED ON 1M 3.5FDD 40MB HDD | |
| 366603-01 | LABEL, UPC USED ON 1M 3.5FDD 100MB HDD | |
| 360804-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS | |
| 366561-02 | LABEL, RATING - MADE IN USA | |
| 366561-03 | LABEL, RATING - MADE IN HONG KONG (SUB FOR -02) | |
| **386SX-20 EUROPE** | | |
| 523820-01 | 1M | |
| 523820-02 | 3F1.44 3H50MB 1M | |
| 523820-04 | 3F1.44M 3H50MB 2M | |
| 523820-05 | 3H50MB 2M | |
| 523820-06 | 3F1.44 5F1.2M 2M | |
| 523820-07 | 3F1.44M 1M | |
| 523820-08 | 3F1.44M 3H40MB 1M | |
| 523820-09 | 3F1.44M 3H100MB 1M | |
| 523820-01A | W/1M | *AS SHIPPED FROM DTK |
| 523820-02A | W/1M 1.44FDD 50MB HDD | *AS SHIPPED FROM DTK |
| 390698-01 | MEMORY MODULE 1M SIMM | |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB | |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB | |
| 313241-02 | DRIVE ASSY HDD 40MB | |
| 311839-01 | DRIVE ASSY HDD 50MB | |
| 311840-01 | DRIVE ASSY HDD 100MB | |
| 906610-01 | SCREW MACH #6-32X.250LG QTY = 4 HDD | |
| 906800-03 | SCREW MACH M3X.5.8LG QTY = 4 FDD | |
| 316585-05 | LABEL HDD TYPE #17 (40MB) | |
| 316585-08 | LABEL HDD TYPE #26 (50MB) | |
| 316585-09 | LABEL HDD TYPE #27 (100MB) | |
| 325090-04 | SEAL, MANUFACTURING | |
| 366561-04 | LABEL, RATING - MADE IN GERMANY | |
| 366561-06 | LABEL, RATING - MADE IN USA (SUB FOR -04) | |
| **KEYBOARD SHIPPING ASSY 3.5 386SX-20** | | |
| 583861-01 | US | |
| 583861-02 | CN | |
| 583861-03 | UK | |
| 583861-04 | GR | |
| 583861-05 | FR | |
| 583861-06 | IT | |
| 583861-07 | SP | |
| 583861-08 | SG | |
| 583861-09 | SF | |
| 583861-10 | AU | |
| 583861-11 | NR | |
| 583861-12 | SD | |
| 583861-13 | FN | |
| 583861-14 | NE | |
| 583861-15 | DN | |

| KEYBOARD SHIPPING ASSY 3.5SX-20 *(Continued)* | |
|---|---|
| 583861-16 | BF |
| 583861-17 | BD |
| 583861-18 | AL |
| 583861-19 | CE |
| 583861-20 | PG |
| 363734-01 | BOX, PACKING |
| 318172-01 | SPACER |
| 903508-01 | CORD, POWER VDE |
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-18 | CORD, POWER UL/CSA |
| 312796-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-03 | KEYBOARD ASSY DN |
| 312796-02 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 368078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368081-02 | QP GUIDE CBM PC PROD ENGLISH |
| 368080-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319292-01 | MANUAL BASIC 3.22 ENGLISH |
| 363291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368108-01 | QP GUIDE CBM PC PROD GERMAN |
| 368106-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | QP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363268-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368088-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | QP GUIDE CBM PC PROD ITALIAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | QP GUIDE CBM PC PROD SPANISH |
| 368097-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | QP GUIDE CBM PC PROD SWEDISH |
| 368095-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363273-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | QP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | QP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368090-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | QP GUIDE CBM PC PROD NORWEGIAN |

# Commodore International Spare Parts List
## SL386SX-20 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 3.5 386SX-20 *(Continued)* | |
|---|---|
| 368098-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |
| 318696-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |
| 318882-01 | CARD, WARRANTY CN |
| 368014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312341-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367610-01 | DISK ASSY 3.5 386SX-16/20 UTILITIES ENGLISH |
| 367611-01 | DISK ASSY 3.5 930 VGA ADAPTER UTILITIES ENGLISH |
| 317181-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ENGLISH |
| 317182-03 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ENGLISH |
| 317183-03 | DISK ASSY 3.5 MS DOS SHELL 1.01 ENGLISH |
| 317184-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL GERMAN |
| 317185-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS GERMAN |
| 317186-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 GERMAN |
| 317187-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL FRENCH |
| 317188-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS FRENCH |
| 317189-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 FRENCH |
| 317190-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL ITALIAN |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS ITALIAN |
| 317192-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 ITALIAN |
| 317193-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SPANISH |
| 317191-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SPANISH |
| 317195-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SPANISH |
| 317199-03 | DISK ASSY 3.5 MS DOS 4.01 OP SYS SWEDISH |
| 317200-01 | DISK ASSY 3.5 MS DOS 4.01 INSTALL SWEDISH |
| 317202-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 SWEDISH |
| 317196-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL DUTCH |
| 317197-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS DUTCH |
| 317198-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 DUTCH |
| 317203-03 | DISK ASSY 3.5 MS DOS 4.01 INSTALL PORTUGUESE |
| 317204-01 | DISK ASSY 3.5 MS DOS 4.01 OP SYS PORTUGUESE |
| 317205-02 | DISK ASSY 3.5 MS DOS SHELL 1.01 PORTUGUESE |
| **KEYBOARD SHIPPING ASSY 5.25 386SX-20** | |
| 583860-01 | US |
| 583860-02 | CN |
| 583860-03 | UK |
| 583860-04 | GR |
| 583860-05 | FR |
| 583860-06 | IT |
| 583860-07 | SP |
| 583860-08 | SG |
| 583860-09 | SF |
| 583860-10 | AU |
| 583860-11 | NR |
| 583860-12 | SD |
| 583860-13 | FN |
| 583860-14 | NE |
| 583860-15 | DN |
| 583860-16 | BF |
| 583860-17 | BD |
| 583860-18 | AL |
| 583860-19 | CE |
| 583860-20 | PG |
| 363734-01 | BOX, PACKING |
| 318172-01 | SPACER |
| 903508-01 | CORD, POWER VDE |
| 903508-02 | CORD, POWER SEV |
| 903508-03 | CORD, POWER SAA |
| 903508-07 | CORD, POWER BSI |
| 903508-18 | CORD, POWER UL/CSA |
| 312796-01 | KEYBOARD ASSY UK |
| 312796-03 | KEYBOARD ASSY GR |
| 312796-05 | KEYBOARD ASSY FR |
| 312796-04 | KEYBOARD ASSY IT |
| 312796-06 | KEYBOARD ASSY SP |
| 312796-07 | KEYBOARD ASSY SG |

| KEYBOARD SHIPPING ASSY 5.25 386SX-20 *(Continued)* | |
|---|---|
| 312796-12 | KEYBOARD ASSY SF |
| 312796-10 | KEYBOARD ASSY SD/FN |
| 312796-09 | KEYBOARD ASSY NR |
| 312796-03 | KEYBOARD ASSY DN |
| 312796-02 | KEYBOARD ASSY ASCII |
| 312796-13 | KEYBOARD ASSY BG |
| 368078-03 | INTRO GUIDE SL286/386SX ENGLISH |
| 368081-02 | OP GUIDE CBM PC PROD ENGLISH |
| 368080-03 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ENGLISH |
| 363267-01 | MANUAL DOS 4.01 ENGLISH |
| 319292-01 | MANUAL BASIC 3.22 ENGLISH |
| 363291-01 | MANUAL DOS SHELL 1.01 ENGLISH |
| 368104-02 | INTRO GUIDE SL286/386SX GERMAN |
| 368108-01 | OP GUIDE CBM PC PROD GERMAN |
| 368106-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER GERMAN |
| 363270-01 | MANUAL DOS 4.01 GERMAN |
| 319288-01 | MANUAL BASIC 3.22 GERMAN |
| 363294-01 | MANUAL DOS SHELL 1.01 GERMAN |
| 368105-02 | INTRO GUIDE SL286/386SX FRENCH |
| 368109-01 | OP GUIDE CBM PC PROD FRENCH |
| 368107-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FRENCH |
| 363268-01 | MANUAL DOS 4.01 FRENCH |
| 319289-01 | MANUAL BASIC 3.22 FRENCH |
| 363292-01 | MANUAL DOS SHELL 1.01 FRENCH |
| 368093-02 | INTRO GUIDE SL286/386SX ITALIAN |
| 368110-01 | OP GUIDE CBM PC PROD ITALIAN |
| 368096-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER ITALIAN |
| 363269-01 | MANUAL DOS 4.01 ITALIAN |
| 319290-01 | MANUAL BASIC 3.22 ITALIAN |
| 363293-01 | MANUAL DOS SHELL 1.01 ITALIAN |
| 368098-02 | INTRO GUIDE SL286/386SX SPANISH |
| 368111-01 | OP GUIDE CBM PC PROD SPANISH |
| 368097-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SPANISH |
| 363271-01 | MANUAL DOS 4.01 SPANISH |
| 319291-01 | MANUAL BASIC 3.22 SPANISH |
| 363295-01 | MANUAL DOS SHELL 1.01 SPANISH |
| 368091-02 | INTRO GUIDE SL286/386SX SWEDISH |
| 368113-01 | OP GUIDE CBM PC PROD SWEDISH |
| 368099-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER SWEDISH |
| 363273-03 | MANUAL DOS 4.01 SWEDISH |
| 363297-02 | MANUAL DOS SHELL 1.01 SWEDISH |
| 368093-02 | INTRO GUIDE SL286/386SX DUTCH |
| 368101-01 | OP GUIDE CBM PC PROD DUTCH |
| 368115-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DUTCH |
| 363272-01 | MANUAL DOS 4.01 DUTCH |
| 319174-01 | MANUAL BASIC 3.22 DUTCH |
| 363296-01 | MANUAL DOS SHELL 1.01 DUTCH |
| 368095-02 | INTRO GUIDE SL286/386SX PORTUGUESE |
| 368103-01 | OP GUIDE CBM PC PROD PORTUGUESE |
| 368117-02 | USERS GUIDE VGA 16BIT 256/513 ADAPTER PORTUGUESE |
| 363364-01 | MANUAL DOS 4.01 PORTUGUESE |
| 363365-01 | MANUAL BASIC 3.22 PORTUGUESE |
| 363366-01 | MANUAL DOS SHELL 1.01 PORTUGUESE |
| 368090-02 | INTRO GUIDE SL286/386SX NORWEGIAN |
| 368112-01 | OP GUIDE CBM PC PROD NORWEGIAN |
| 368098-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER NORWEGIAN |
| 368092-02 | INTRO GUIDE SL286/386SX FINNISH |
| 368100-01 | OP GUIDE CBM PC PROD FINNISH |
| 368114-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER FINNISH |
| 368094-02 | INTRO GUIDE SL286/386SX DANISH |
| 368102-01 | OP GUIDE CBM PC PROD DANISH |
| 368116-02 | USERS GUIDE VGA 16BIT 256/512 ADAPTER DANISH |
| 318757-15 | SHRINK WRAP - DISK & MANUALS |
| 318896-01 | PROGRAM LICENSE AGREEMENT |
| 318876-01 | SERVICE CENTER LIST (AL) |
| 318365-03 | CARD, WARRANTY US |
| 318882-01 | CARD, WARRANTY CN |
| 368014-01 | CARD, WARRANTY AL |
| 318556-02 | CARD, DISK EXCHANGE CN |
| 312341-02 | CARD, DISK EXCHANGE US |
| 368084-01 | SEAL, TAMPER EVIDENT - FOR BOX FLAPS |
| 367607-01 | DISK ASSY 5.25 386SX-16/20 UTILITIES ENGLISH |
| 367608-01 | DISK ASSY 5.25 930 VGA ADAPTER UTILITIES ENGLISH |
| 317882-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL ENGLISH |
| 317883-01 | DISK ASSY 5.25 MS DOS 4.01 SELECT ENGLISH |
| 317884-01 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |

# Commodore International Spare Parts List
## SL386SX-20 SHIPPING ASSEMBLIES *(Continued)*

| KEYBOARD SHIPPING ASSY 5.25 386SX-20 *(Continued)* | |
|---|---|
| 317885-02 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317886-03 | DISK ASSY 5.25 MS DOS 4.01 OP SYS ENGLISH |
| 317887-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 ENGLISH |
| 367025-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 GERMAN |
| 367026-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 GERMAN |
| 367027-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 GERMAN |
| 367028-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 GERMAN |
| 367029-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 GERMAN |
| 367030-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 GERMAN |
| 367031-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 FRENCH |
| 367032-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 FRENCH |
| 367033-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 FRENCH |
| 367034-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 FRENCH |
| 367035-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 FRENCH |
| 367036-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 FRENCH |
| 317886-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 ITALIAN |
| 317889-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 ITALIAN |
| 317890-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 ITALIAN |
| 317891-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 ITALIAN |
| 317892-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 ITALIAN |
| 317893-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 ITALIAN |
| 317871-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 SPANISH |
| 317872-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 SPANISH |

| KEYBOARD SHIPPING ASSY 5.25 386SX-20 *(Continued)* | |
|---|---|
| 317873-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 SPANISH |
| 317874-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 SPANISH |
| 317875-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 SPANISH |
| 317876-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 SPANISH |
| 317168-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 SWEDISH |
| 317169-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 SWEDISH |
| 317170-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 SWEDISH |
| 317171-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 SWEDISH |
| 317172-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 SWEDISH |
| 317173-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 SWEDISH |
| 317877-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 DUTCH |
| 317878-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 DUTCH |
| 317879-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 DUTCH |
| 317880-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 DUTCH |
| 317881-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 DUTCH |
| 317882-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 DUTCH |
| 317162-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #1 PORTUGUESE |
| 317163-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #2 PORTUGUESE |
| 317164-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #3 PORTUGUESE |
| 317165-01 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #4 PORTUGUESE |
| 317166-02 | DISK ASSY 5.25 MS DOS 4.01 INSTALL #5 PORTUGUESE |
| 317167-01 | DISK ASSY 5.25 MS DOS SHELL 1.01 PORTUGUESE |

# Commodore International Spare Parts List
## SL386SX-20 MAJOR ASSEMBLIES

Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

| | |
|---|---|
| 312824-01 | SLIM LINE ASSEMBLY 386SX-1M |
| 312824-02 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M 3H50MB |
| 312824-04 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M,3H50MB |
| 312824-05 | SLIM LINE ASSEMBLY 386SX-2M,3H50MB |
| 312824-06 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M,5F1.20M,3H50MB |
| 312824-07 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44M |
| 312824-08 | SLIM LINE ASSEMBLY 386SX-1M,3F1.44,3H40MB |
| 312824-09 | SLIM LINE ASSEMBLY 386SX-2M,3F1.44M,3H100MB |
| 394204-01 | CASE, TOP COVER ASSY |
| 394202-01 | BEZEL |
| 394222-01 | SCREW M-3 HEX |
| 394209-01 | ADAPTER PLATE |
| 394210-01 | TIE ROD |
| 394211-01 | PCB GUIDE |
| 394212-01 | BRACKET-ADAPTER |
| 394221-01 | SCREW #6-32x8 |
| 394213-01 | CONTROL PANEL ASSY |
| 394214-01 | STUD |
| 394205-01 | CHASSIS |
| 394215-01 | FOOT, RUBBER |
| 394216-01 | BRACKET, FDD - RIGHT |
| 394217-01 | POWER SUPPLY |
| 394218-01 | COVER, HDD 3.5 |
| 390939-01 | SCREW M3X8 |
| 906610-01 | SCREW #6-32X5 |
| 394206-01 | SUPPORT, HDD - RIGHT |
| 394208-01 | SPRING, COVER |
| 394220-01 | SCREW M3X5 |
| 394207-01 | SUPPORT, HDD - LEFT |
| 325542-02 | SCREW M4X6 |
| 394203-01 | COVER, FDD |
| 394201-01 | SPRING PLATE CONNECTOR |
| 906883-02 | SCREW, M3X4, TAPERING |
| 312821-03 | LOGO (NAMEPLATE) |
| 906800-05 | SCREW M3X6 PCB MOUNT |
| 906883-05 | SCREW M3X12 BEZEL TO CASE |
| 394219-01 | PCB EXP RISER BRD |
| 390917-01 | PCB MAIN LOGIC PPM2060C |
| 390915-02 | IC ROM HI V1.01 |
| 390914-02 | IC ROM LO V1.01 |
| 390698-01 | MEMORY BRD 1MB SIMM |
| 313067-05 | DRIVE ASSY FDD 3.5 1.44MB |
| 380825-01 | DRIVE ASSY FDD 5.25 1.2MB |
| 313241-02 | DRIVE ASSY HDD 40MB 28MS |
| 311839-01 | DRIVE ASSY HDD 50MB 19MS |
| 390883-01 | VGA CARD |
| 311840-01 | DRIVE ASSY HDD 100MB 19MS |
| 906800-03 | SCREW, MACH M3X.5X.8LG FDD |
| 325090-04 | SEAL, WARRANTY |
| 394234-01 | CLIP, TOP GROUND |
| 366561-02 | LABEL, RATING UL/CSA |
| 366561-04 | LABEL, RATING VDE,BSI,SAA,SEV |
| 366561-03 | LABEL, RATING SUB FOR -02 |
| 366561-06 | LABEL, RATING SUB FOR -04 |

# Commodore International Spare Parts List
## SL386SX-20 PCB Components
## PCB Assembly #390917-01 (DTK PPM2060C)

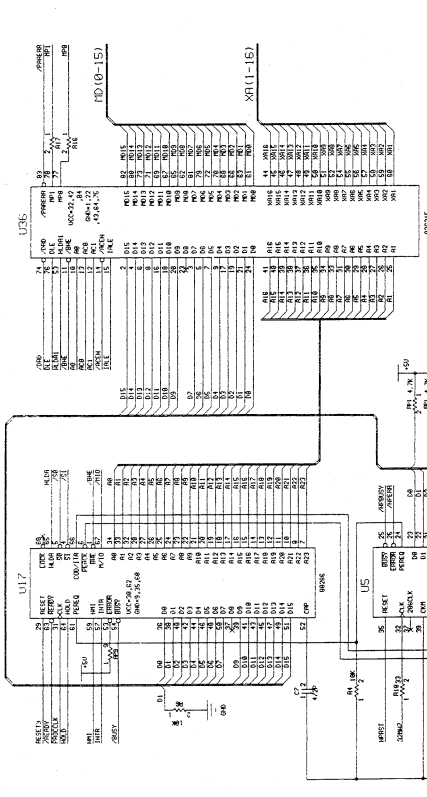
Commodore part numbers are provided for reference only and do not indicate the availability of spare parts from Commodore. Industry standard parts (Resistors, Capacitors, Connectors) should be secured locally. Part number information may vary according to country, some parts may not be available in all countries.

| IC COMPONENTS | | |
|---|---|---|
| 390993-02 | CPU 80386SX-20 | U35 |
| 390915-02 | ROM Hi V1.01 | |
| 390914-02 | ROM LO V1.01 | |
| 609204-01 | PER CTRL 82C206 | U58 |
| 609204-02 | 82C211-20 | U17 |
| 609204-03 | 82C212-20 | U16 |
| 609204-04 | ADDRESS BUFFER 82C215 | U44 |
| 609204-05 | 8473V (PLCC) | U53 |
| 609204-06 | DACE 82C452 | U78 |
| 609204-07 | CMOS 4093 | U6 |
| 609204-08 | 1488 (SMT) | U85,86 |
| 609204-09 | 1489 (SMT) | U82,84 |
| 609204-10 | TTL 74ALS32 (SMT) | U55,73 |
| 609204-11 | CMOS 74HCT08 (SMT) | U56,63 |
| 609204-12 | TTL 74F00 (SMT) | U7,50 |
| 609204-13 | TTL 74F04 (SMT) | U54,70 |
| 609204-14 | TTL 74F08 (SMT) | U47,48 |
| 609204-15 | TTL 74F11 (SMT) | U75 |
| 609204-16 | TTL 74F32 | U49 |
| 609204-17 | TTL 74F32 (SMT) | U8,9,11,18-20,72 |
| 609204-18 | TTL 74F125 (SMT) | U5,46,71 |
| 609204-19 | TTL 74F02 (SMT) | U10 |
| 609204-20 | TTL 74S05 (SMT) | U76 |
| 609204-21 | TTL 74LS04 (SMT) | U74 |
| 609204-22 | TTL 74LS30 (SMT) | U69 |
| 609204-23 | CMOS 74ACT04 (SMT) | U21 |
| **RESISTOR CHIPS** | | |
| 609204-24 | 10 OHM 1/8W J 3216 | R4,6 |
| 609204-25 | 27 OHM 1/8W J 3216 | R39-50 |
| 609204-26 | 33 OHM 1/8W J 3216 | R5,8,10,22-24,35 |
| 609204-27 | 51 OHM 1/8W J 3216 | R14 |
| 609204-28 | 150 OHM 1/8W J 3216 | R16 |
| 609204-29 | 220 OHM 1/8W J 3216 | R1,36 |
| 609204-30 | 330 OHM 1/8W J 3216 | R7,12,37 |
| 609204-31 | 470 OHM 1/8W J 3216 | R25 |
| 609204-32 | 510 OHM 1/8W J 3216 | R30 |
| 609204-33 | 560 OHM 1/8W J 3216 | R15 |
| 609204-34 | 620 OHM 1/8W J 3216 | R21 |
| 609204-35 | 1K 1/8W J 3216 | R11,13,31 |
| 609204-36 | 4.7K 1/8W J 3216 | ,51 |
| 609204-37 | 5.6K 1/8W J 3216 | R18 |
| 609204-38 | 2.2K 1/8W J 3216 | R9 |
| 609204-39 | 10K 1/8W J 3216 | R17,27-29,32,34,38 |
| 609204-40 | 33K 1/8W J 3216 | R26 |
| 609204-41 | 51K 1/8W J 3216 | R33 |
| 609204-42 | 100K 1/8W J 3216 | R2 |
| 609204-43 | 1M 1/8W J 3216 | R3 |
| 609204-44 | 2M 1/8W J 3216 | R19 |
| 609204-45 | 22M 1/8W J 3216 | R20 |
| **CAPACITOR CHIPS** | | |
| 609204-46 | 10PJ 50V NPO 2012 | C8,9,19,20,30 |
| 609204-47 | 22PJ 50V NPO 2012 | C10,14,16,22 |
| 609204-48 | 27PJ 50V NPO 2012 | C24 |
| 609204-49 | 47PJ 50V NPO 2012 | C7,61-64 |
| 609204-50 | 56PJ 50V NPO 2012 | C66 |
| 609204-51 | 101PJ 50V NPO 2012 | C12,32-39,40-47 |
| 609204-52 | 102PK 50V X7R 2012 | C17 |
| 609204-53 | 104PZ 50V Y5V 3216 | K1-7,9-11,13-15,18-23, 25-37,39-54,56,57,61,63-83,85-89,C3,5,6,66 |
| 609204-54 | 221PJ 50V NPO 2012 | C48-51 |
| 609204-55 | 201PJ 50V NPO 2012 | C67 |
| 609204-56 | 222PK 50V X7R 2012 | C52-60 |
| 609204-57 | 333PK 50V X7R 2012 | C18 |
| 609204-58 | 472PK 50V X7R 2012 | C29 |
| 609204-59 | 473PK 25V X7R 2012 | C21 |

| TRANSISTORS AND DIODES | | |
|---|---|---|
| 609204-60 | TR 2N3904 (SMT) | Q2,3 |
| 609204-61 | TR 2N3906 (SMT) | Q1,4 |
| 609204-62 | DIODE FAST IN4148 (SMT) | D1-7 |
| **MISCELLANEOUS** | | |
| 609204-63 | IC CMOS 4069 | U57 |
| 609204-64 | IC 8742 | U77 |
| 609204-65 | LABEL KB2002 DTK | U77 |
| 609204-66 | IC TTL 74F244 | U15,25,29,59,68 |
| 609204-67 | IC CMOS 74PCT244 | U88 |
| 609204-68 | IC TTL 74F373 | U31-34,60 |
| 609204-69 | IC TTL 74ALS245 | U30,42,43,61,66,67,79 |
| 609204-70 | IC TTL 74ALS573 | U40,41,80 |
| 609204-71 | IC TTL 74LS244 | U62,64 |
| 609204-72 | IC TTL 74LS245 | U51,52,65 |
| 609204-73 | RES SIP 1K 8P | RP13 |
| 609204-74 | RES SIP 10K 9P 1/8W | RP11,12,16,17,19-25 |
| 609204-75 | RES SIP-3.33 OHM 8P 1/8W | RP1-3,5-10 |
| 609204-76 | RES SIP 150 OHM 9P | RP18 |
| 609204-77 | RES SIP 4.7K 9P | RP4,14,15,26 |
| 609204-78 | CAP TANT 2.2UF 16V 2.5MM ±20% | C4,27 |
| 609204-79 | CAP TANT 10UF 16V 2.5MM ±20% | C55 K8,12,16,17,24,38, 55,58-60,62,84,90 |
| 609204-80 | CAP TANT 22UF 16V 2.5MM | C28 |
| 609204-81 | CAP TANT 10UF 25V 2.5MM | C31,91-94 |
| 609204-82 | FERRITE BEAD 6*10 1.5T 6 HOLE | L3,25 |
| 609204-83 | VC 30P | VC1 |
| 609204-84 | DELAY LINE 05075 | U4 |
| 609204-85 | OSC 1.8432 MHZ TTL | Y5 |
| 609204-86 | OSC 40 MHZ TTL | Y2 |
| 609204-87 | XTAL 14.318 MHZ | Y1 |
| 609204-88 | XTAL 24 MHZ | Y4 |
| 609204-89 | XTAL 32.768 MHZ | Y3 |
| 609204-90 | BATTERY ROUND 3.6V | BAT1 |
| 609204-91 | FERRITE BEAD 3.5*4.7* 0.8 P10MM | L4-6,23,24,26-28 |
| 609204-92 | BUZZER | BUZZER 1 |
| 609204-93 | JUMPER 1*2 | W1-6,8,9,11-18,20,22,23 |
| 609204-94 | CONN SIMM 1*30 BLACK | CON 1-4 |
| 609204-95 | CONN D TYPE 9P | J10,11 |
| 609204-96 | CONN D TYPE 25P | J12 |
| 609204-97 | P/S MOUSE CONN 6P | J13 |
| 609204-98 | K/B CONN 5P METAL | J14 |
| 609204-99 | POWER CONN 12P | J9 |
| 609205-01 | MICRO FUSE 3A/125V | L29 |
| 609205-02 | SLOT 36P 0.8MM | S2 |
| 609205-03 | SLOT 62P (0.8MM) | S1 |
| 609205-04 | SOCKET 16P SK | U3,14,24,28 |
| 609205-05 | SOCKET 20P SK | U1,2,12,13,22,23,26,27, 36,37,81 |
| 609205-06 | SOCKET 28P SH | U39,40 |
| 609205-07 | SOCKET 40P SH | U77 |
| 609205-08 | SOCKET PLCC 68P | U45 |
| 609205-09 | PIN HEADER 1*2 | W20,22,J2-4 |
| 609205-10 | PIN HEADER 1*3 | W1-6,8,9,11,23 |
| 609205-11 | PIN HEADER 1*4 | J8,15 |
| 609205-12 | PIN HEADER 1*5 | J1 |
| 609205-13 | PIN HEADER 2*7 | W12-18 |
| 609205-14 | PIN HEADER 2*17 | J7 |
| 609205-15 | PIN HEADER 2*20 | J6 |
| 609205-16 | JUMP WIRE 5*10MM | Y3 |
| 609205-17 | IC PAL PRG PPM-2060C-36 | U36 |
| 609205-18 | IC PAL PRG PPM-2060C-37 | U37 |
| 609205-19 | IC PAL PRG PPM-2060C-81 | U81 |

# SECTION 5

# SCHEMATICS



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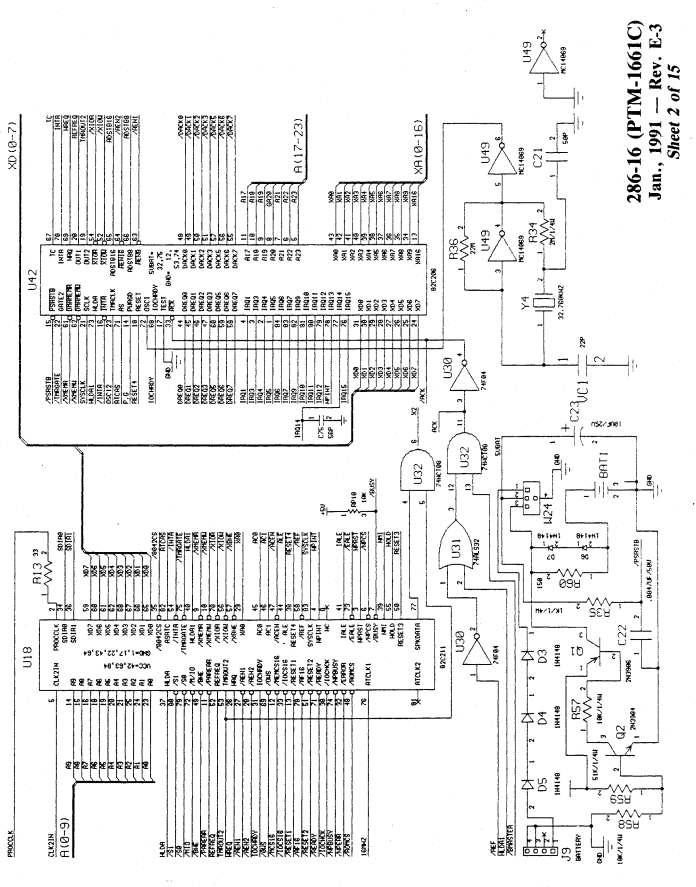

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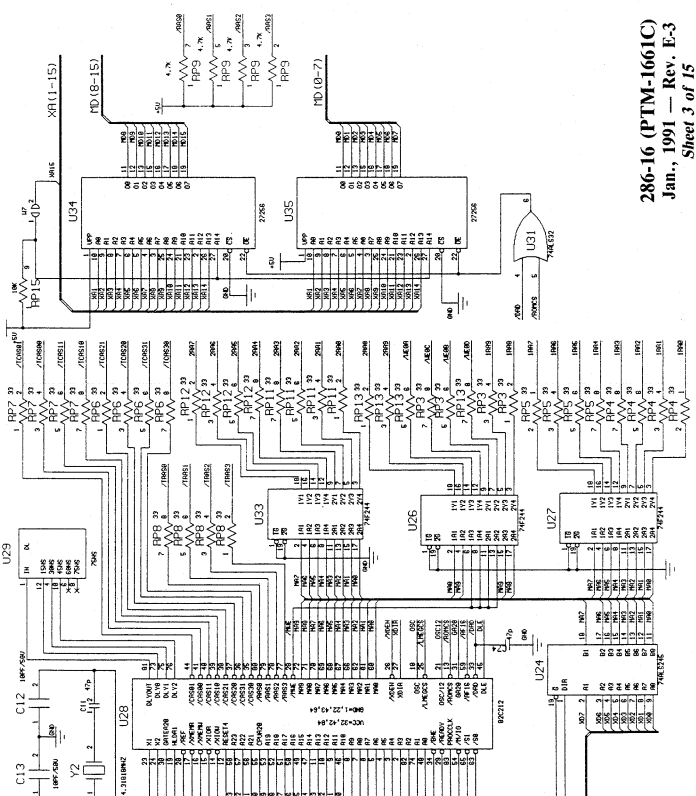

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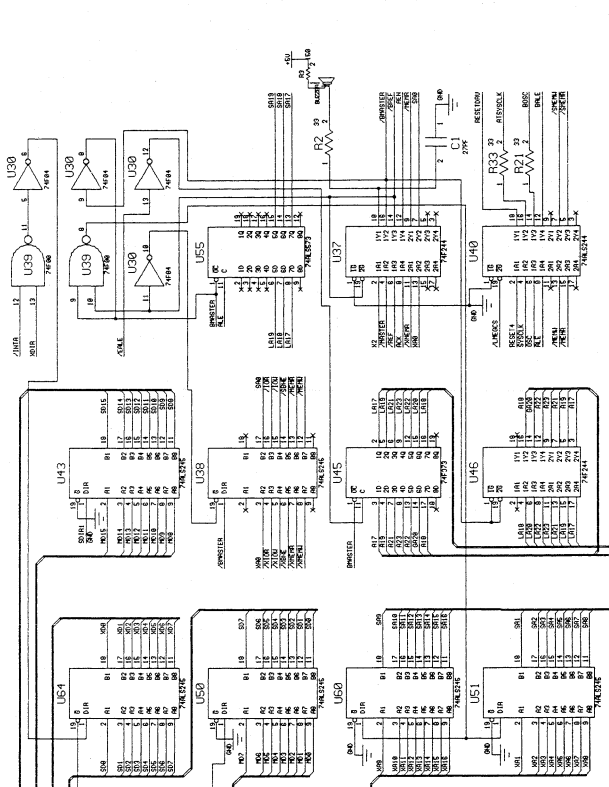

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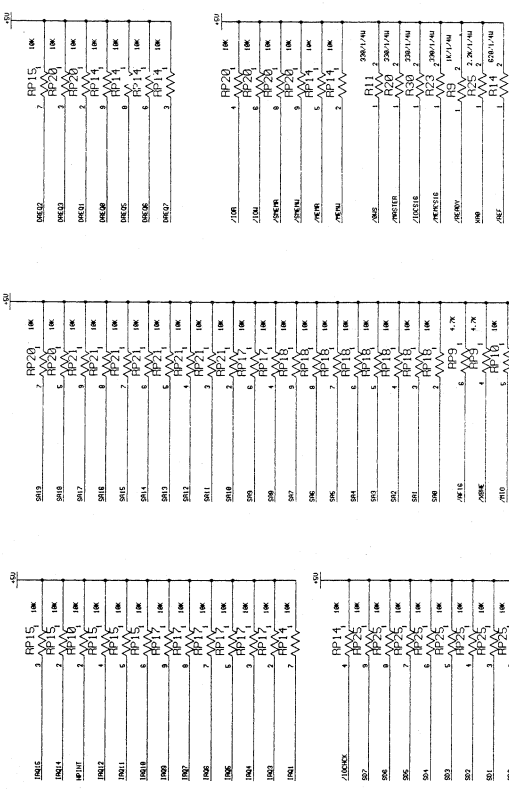

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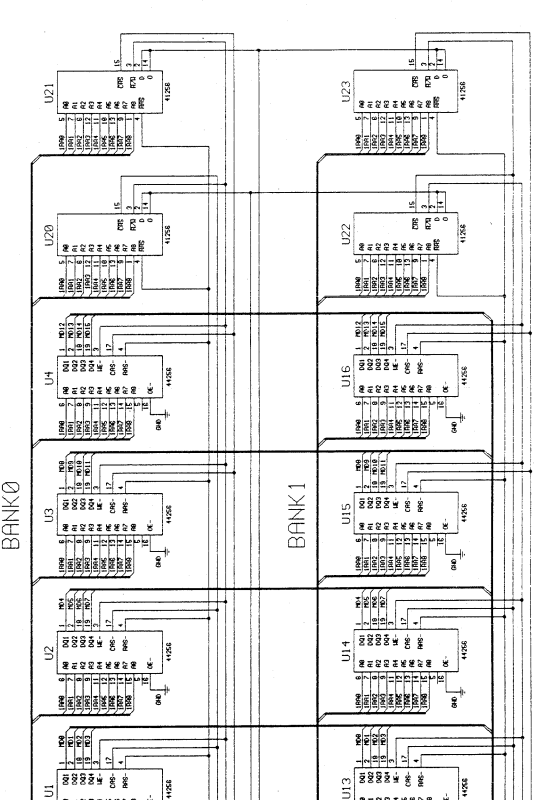


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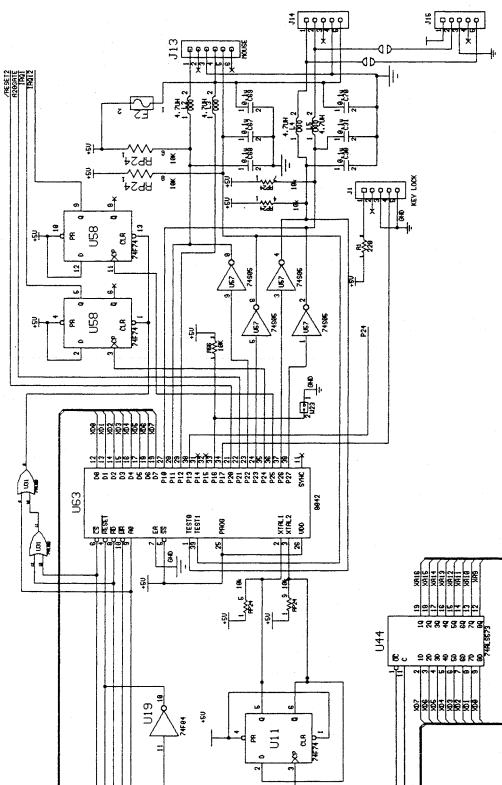

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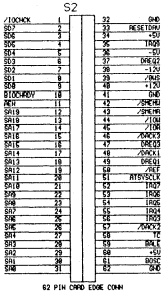


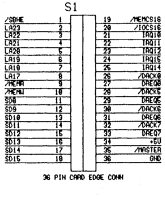


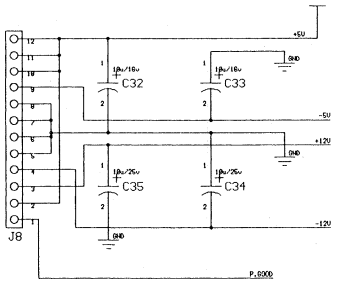


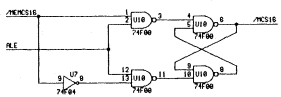


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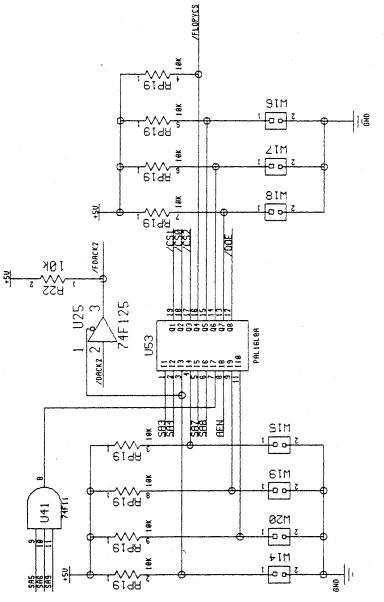

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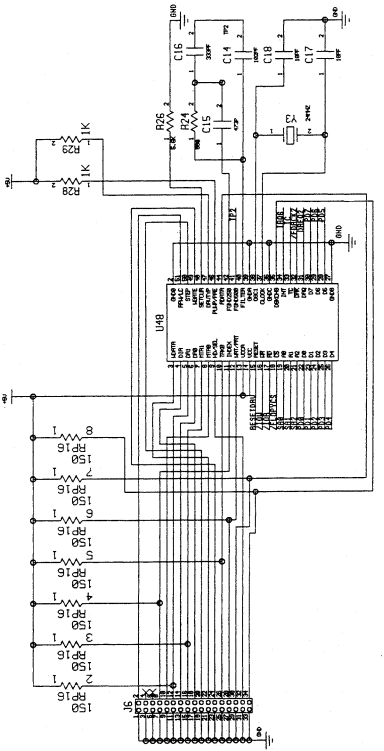

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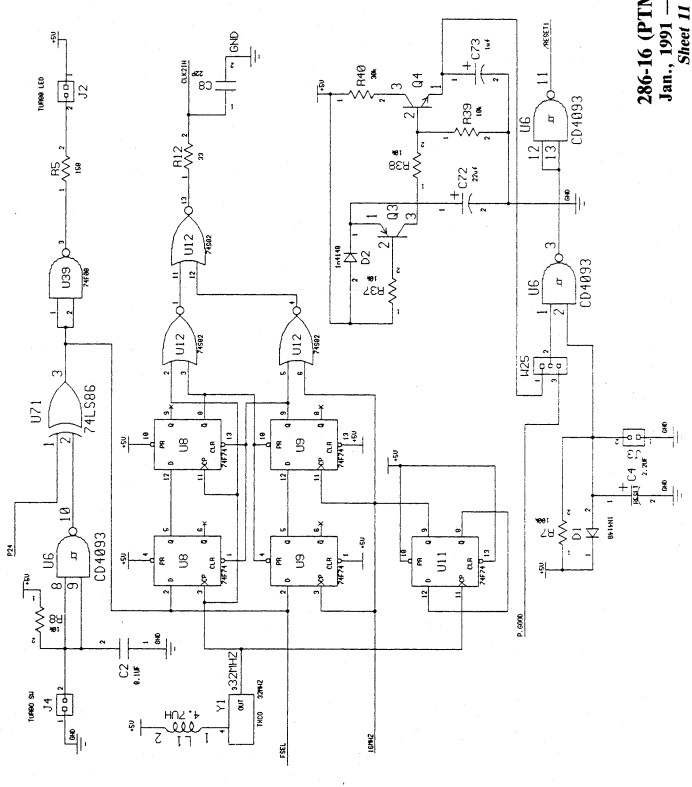

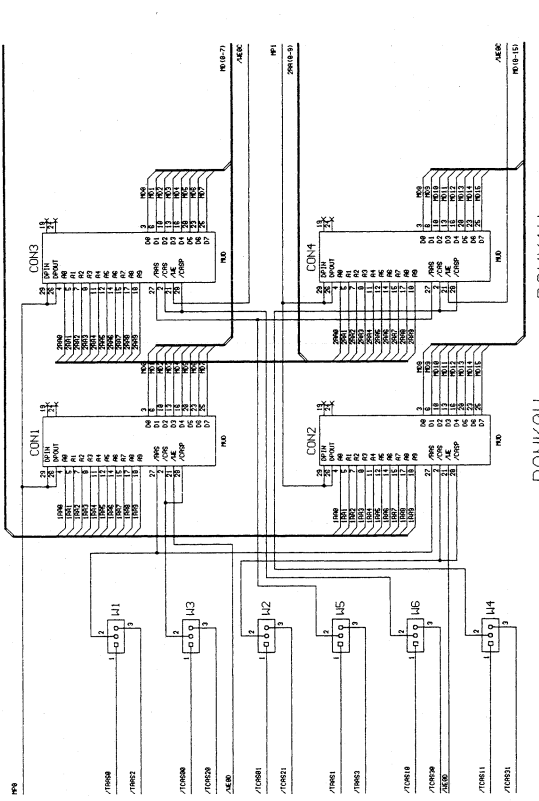


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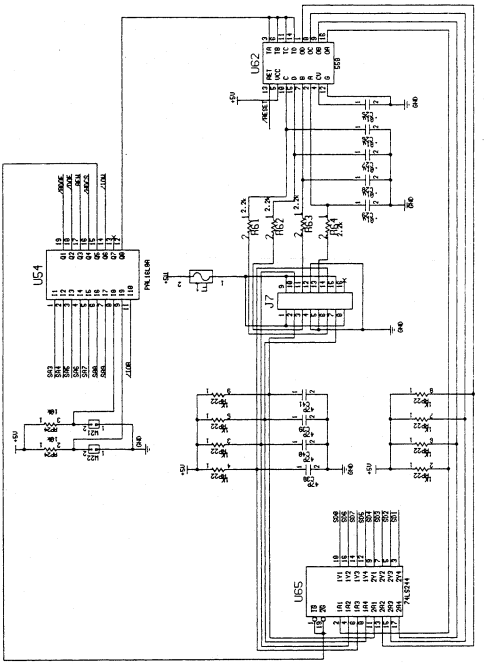

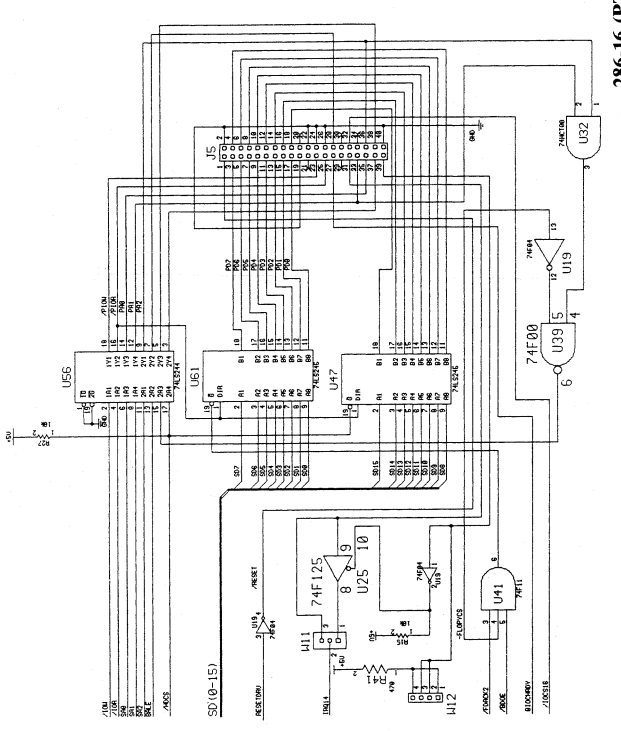

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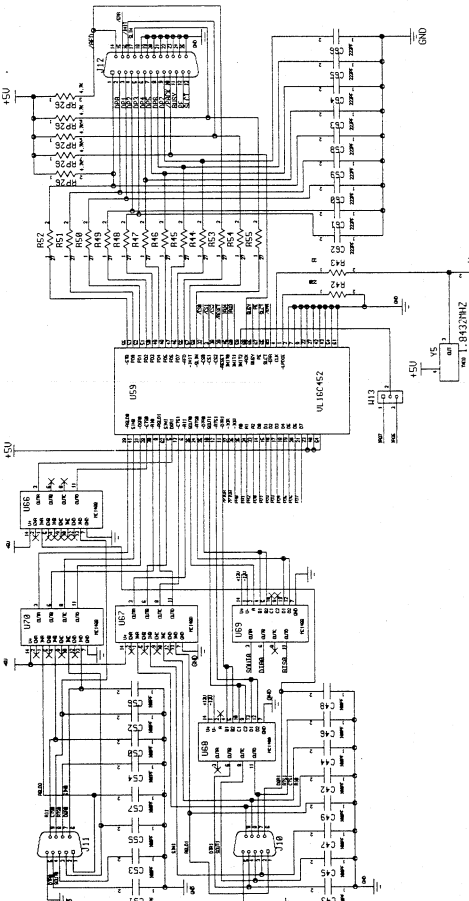

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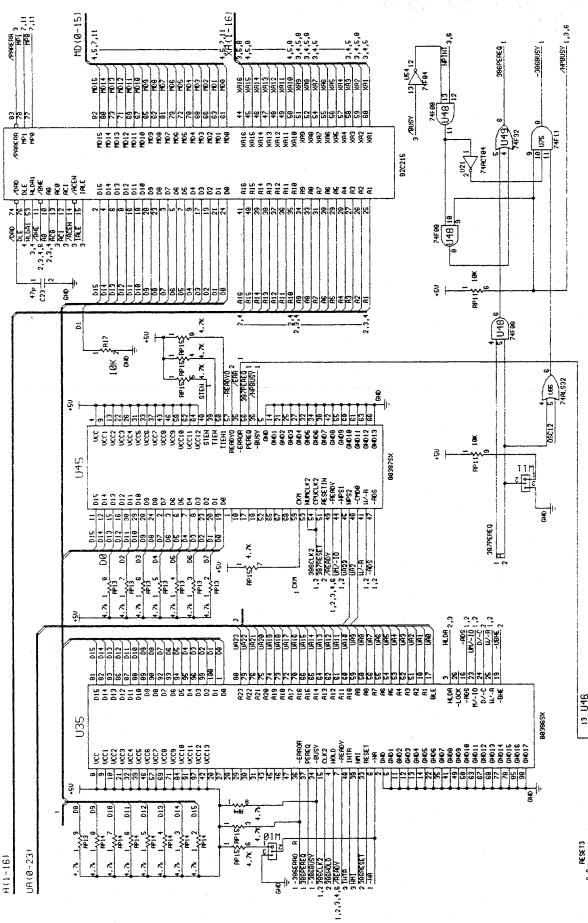

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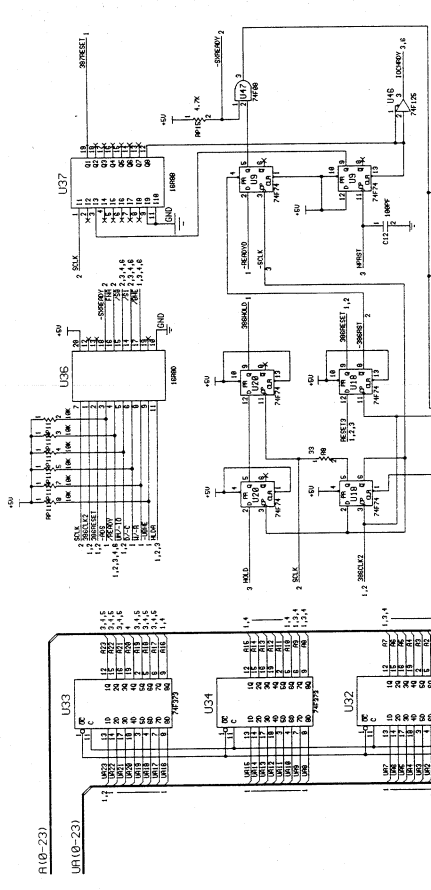

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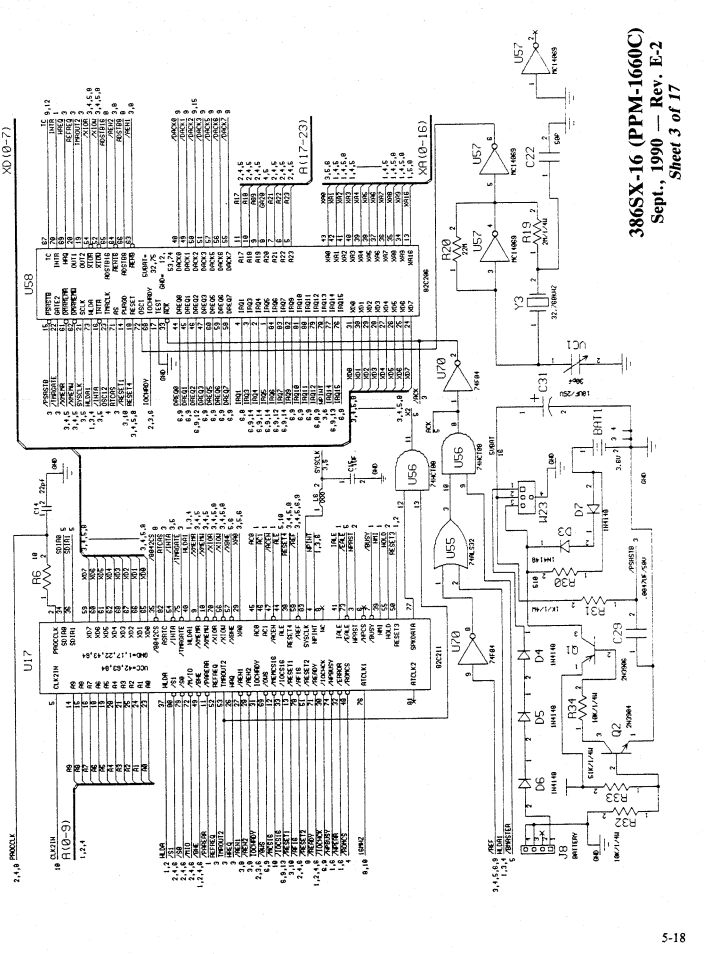

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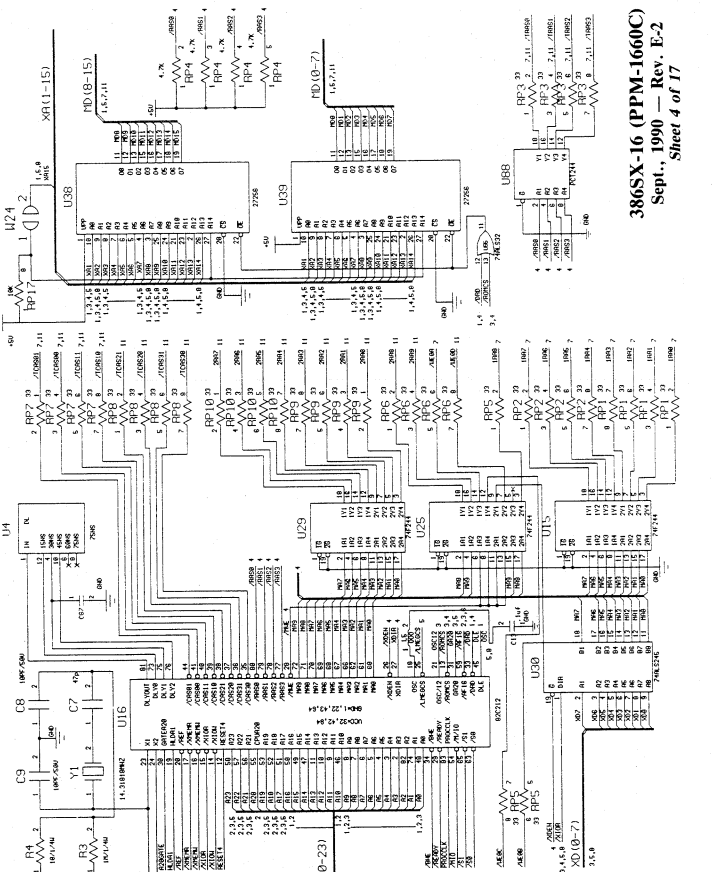

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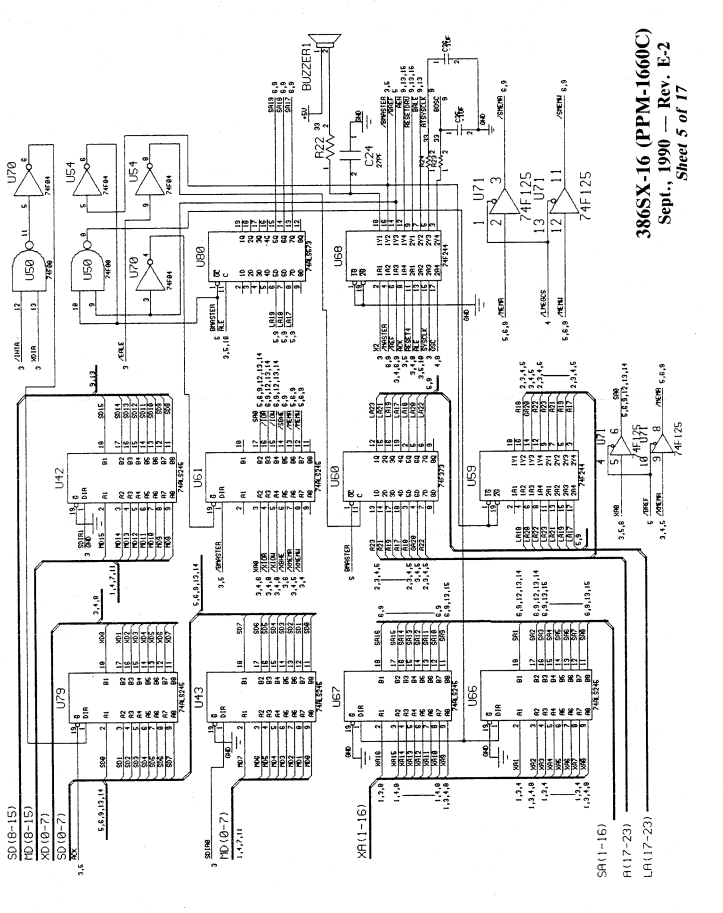

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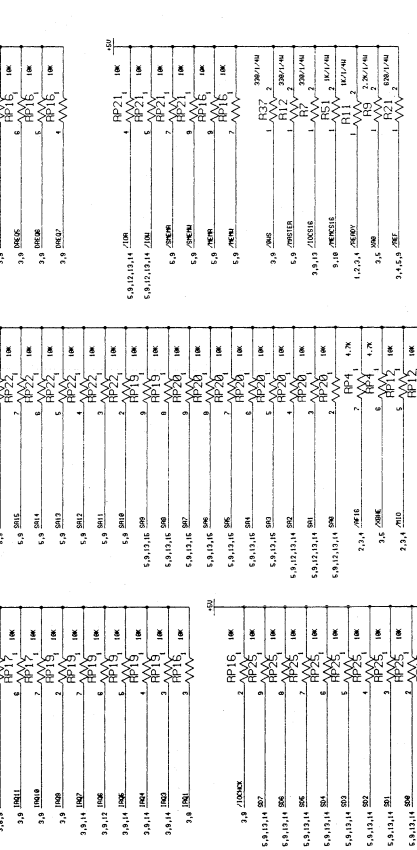

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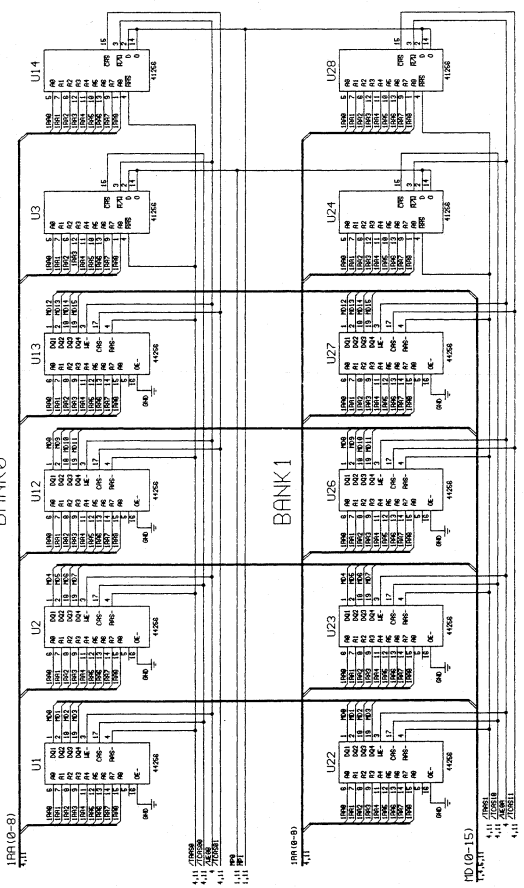


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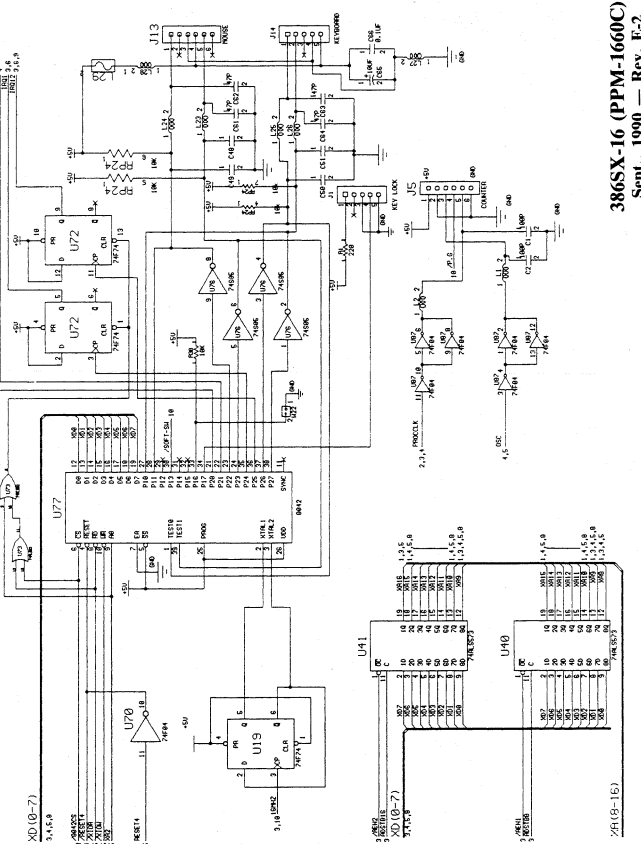

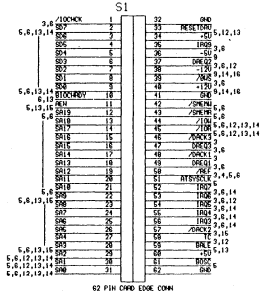


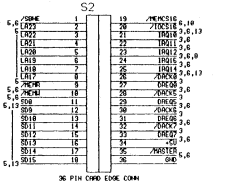


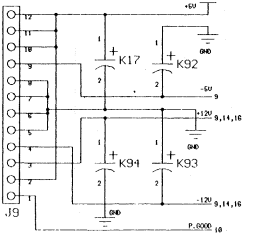


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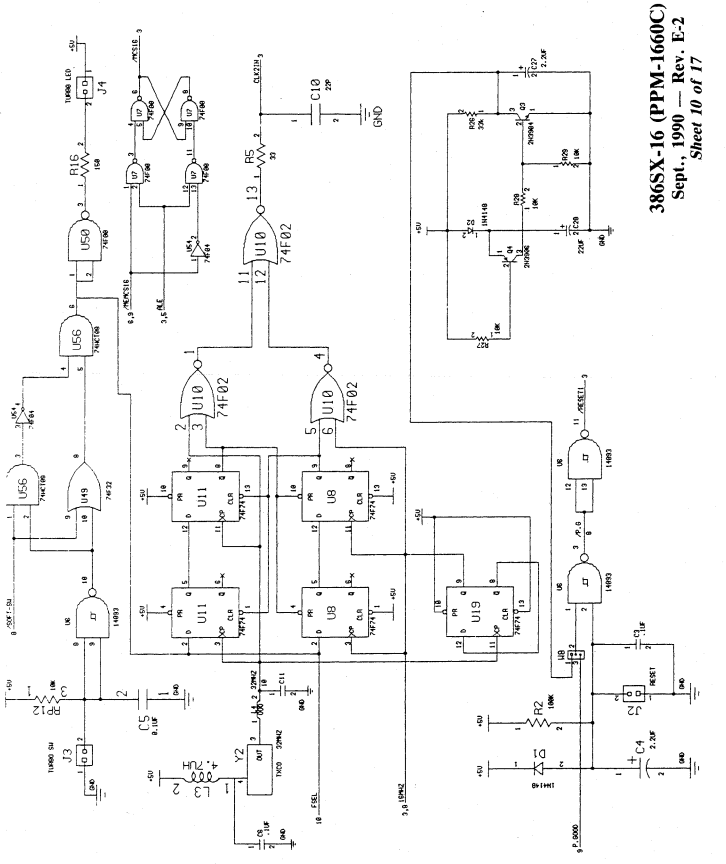

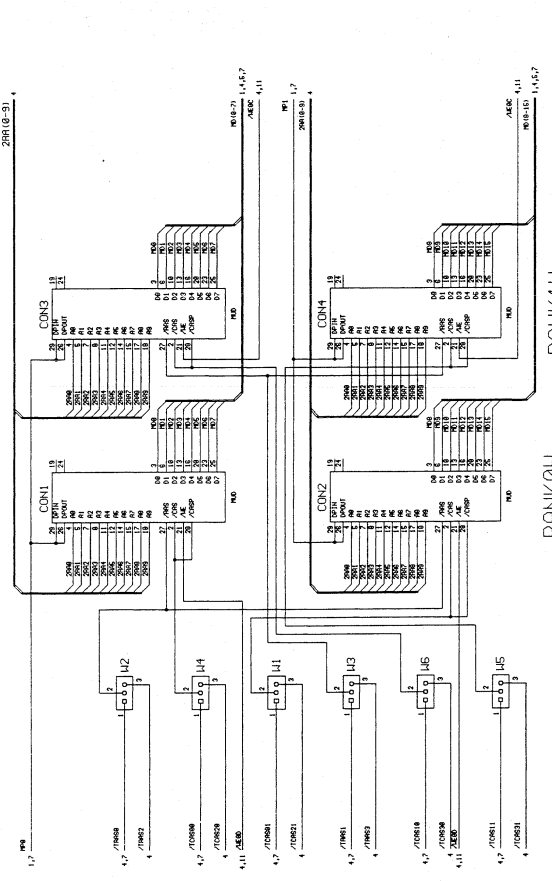


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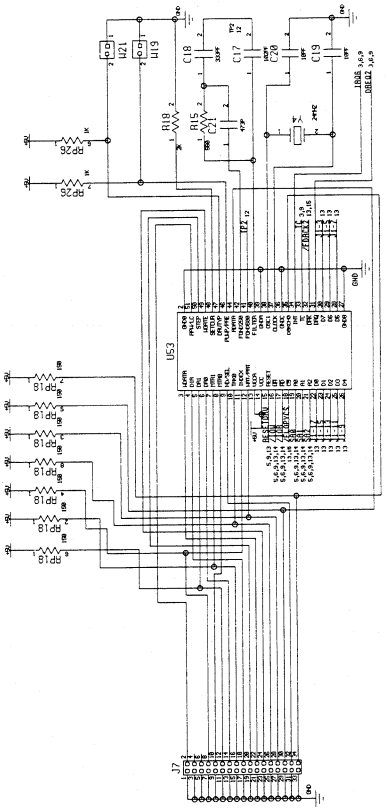

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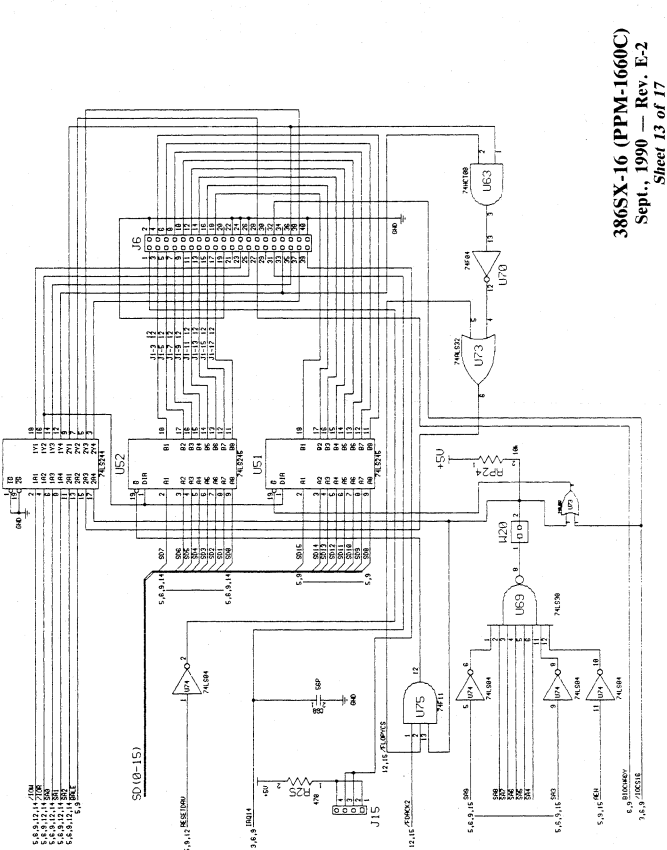

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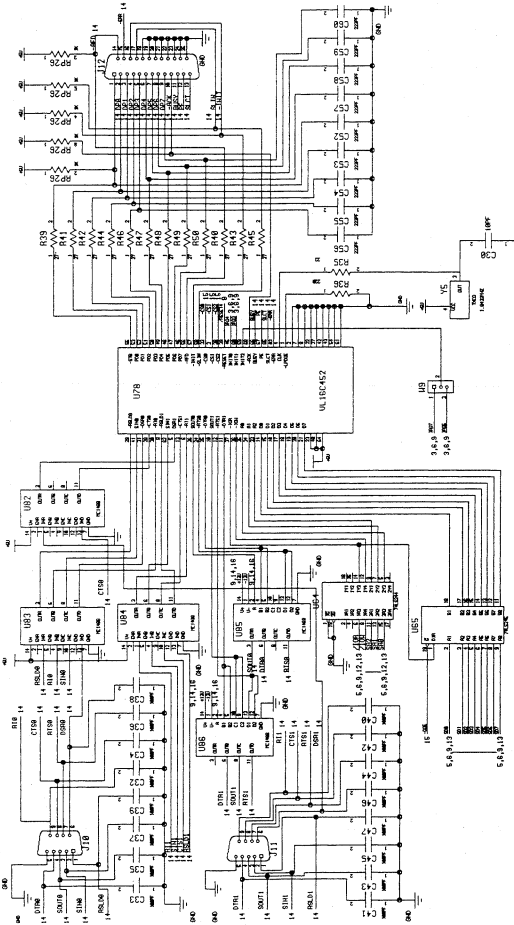

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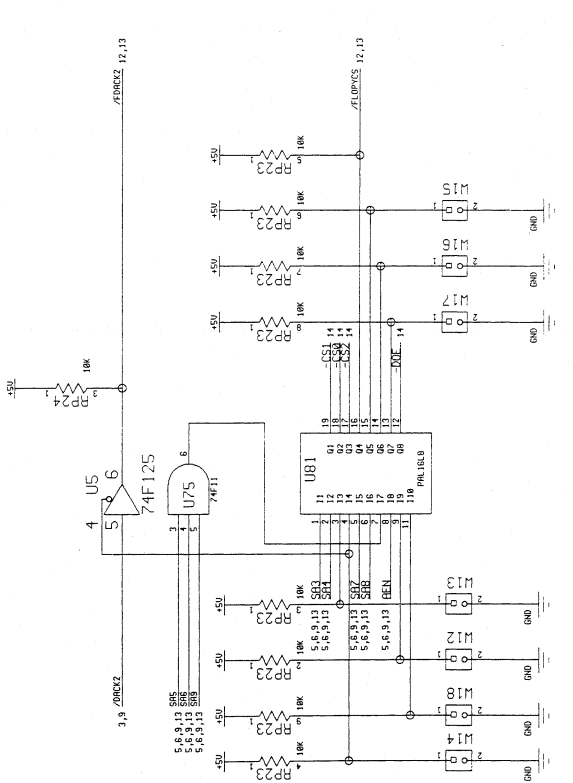

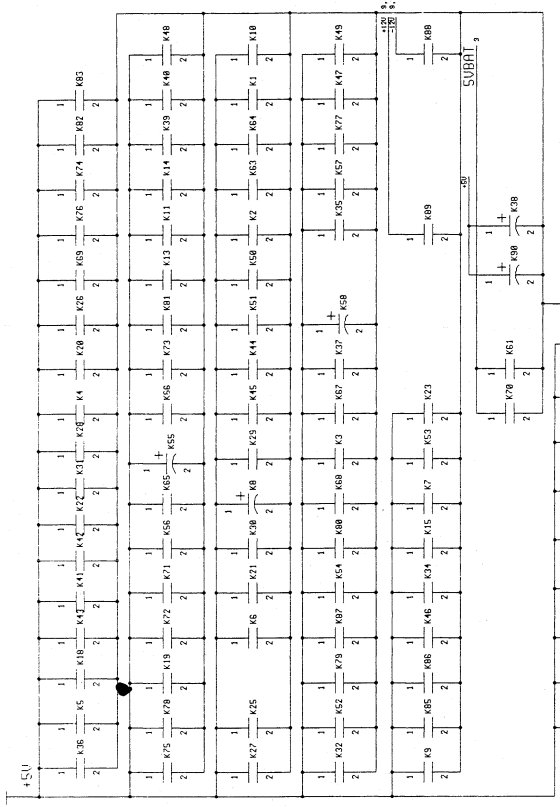


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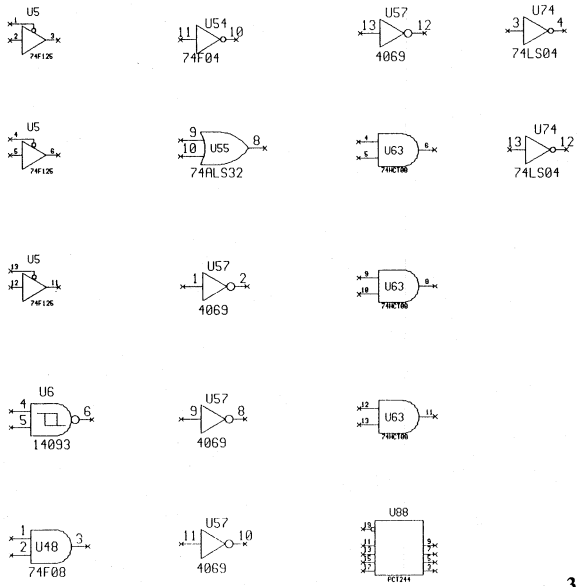




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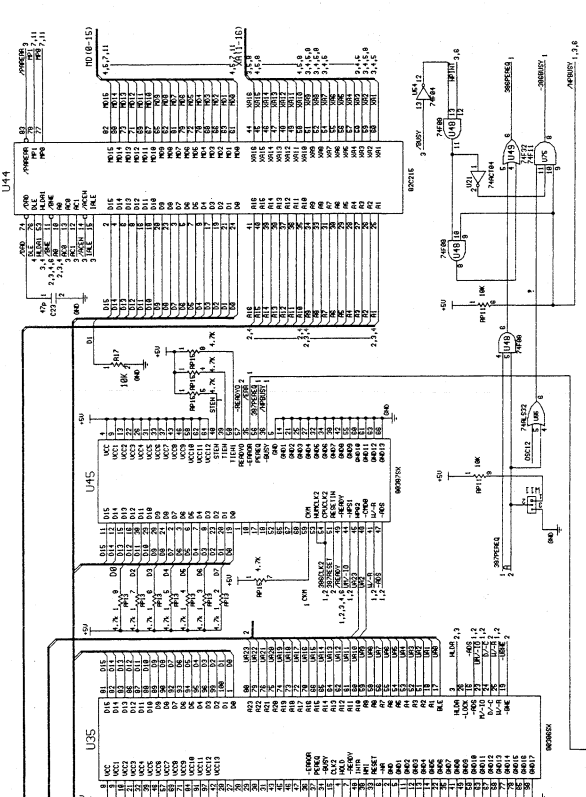

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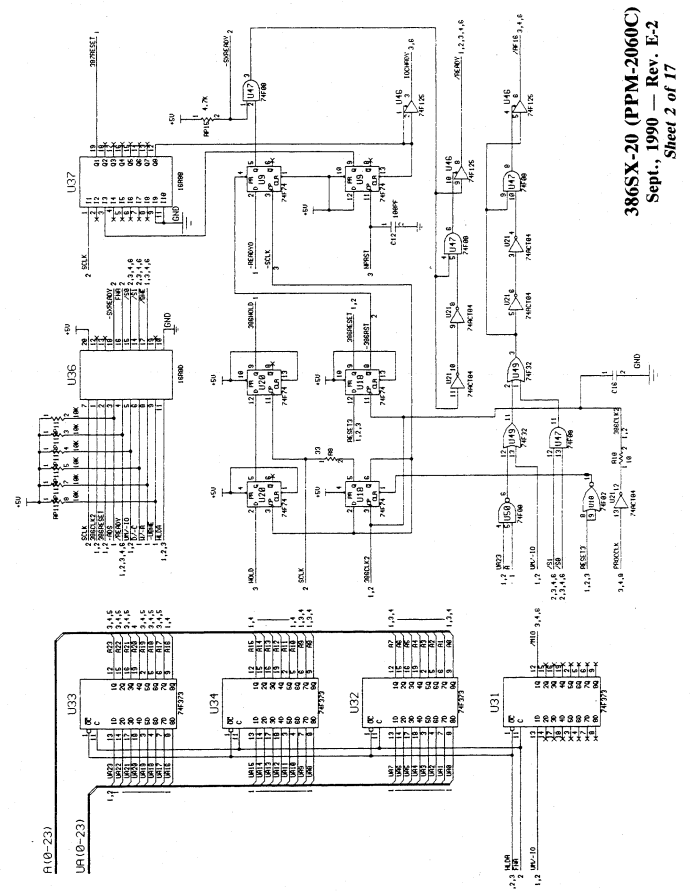

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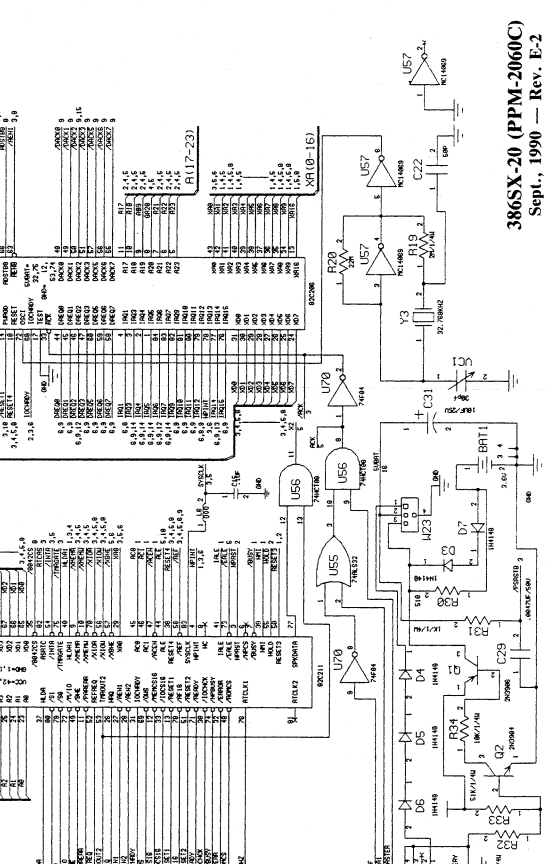

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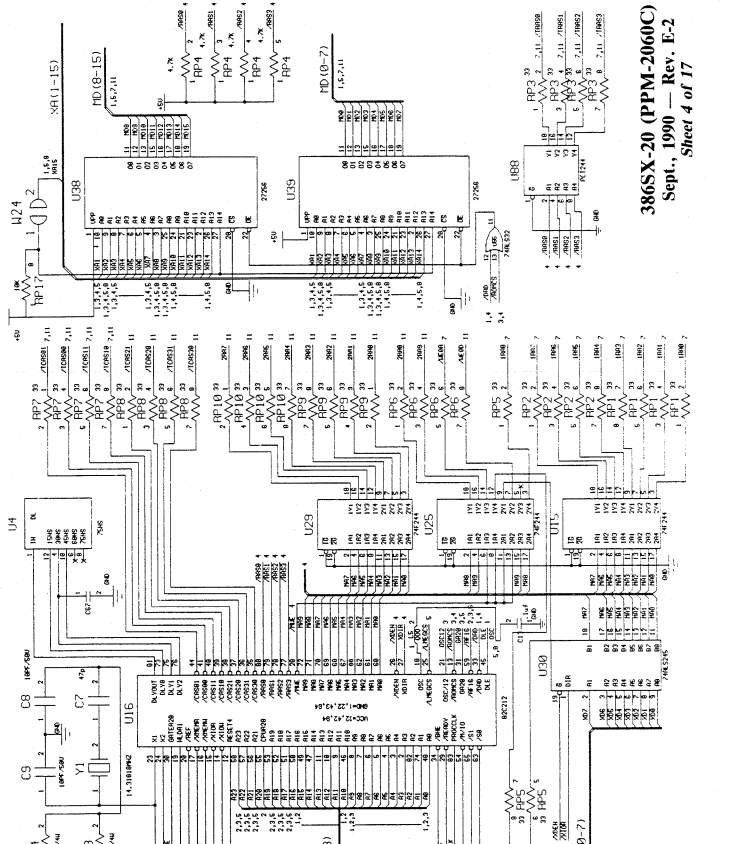

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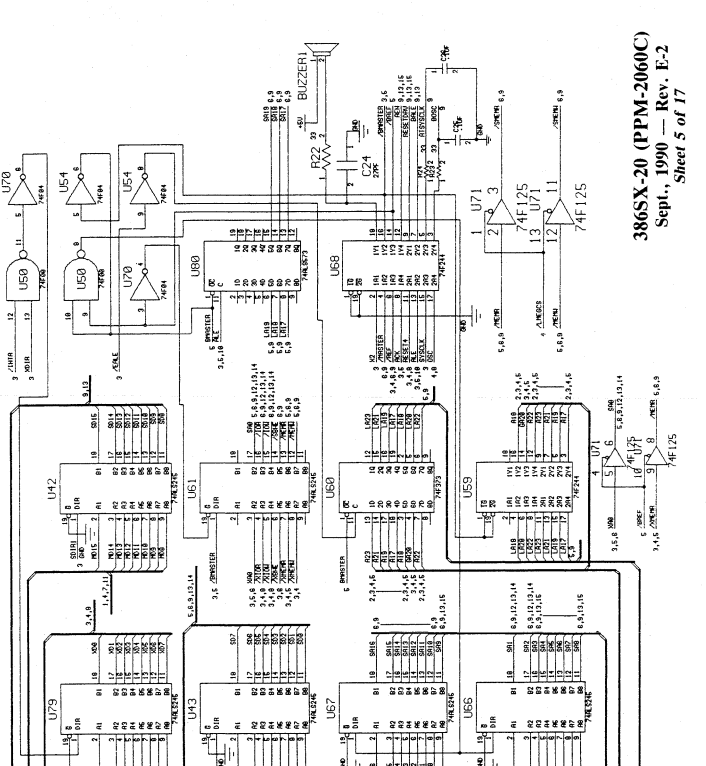

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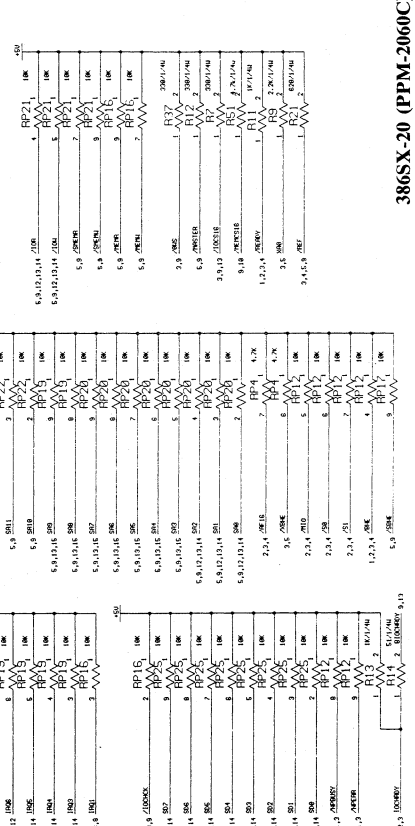

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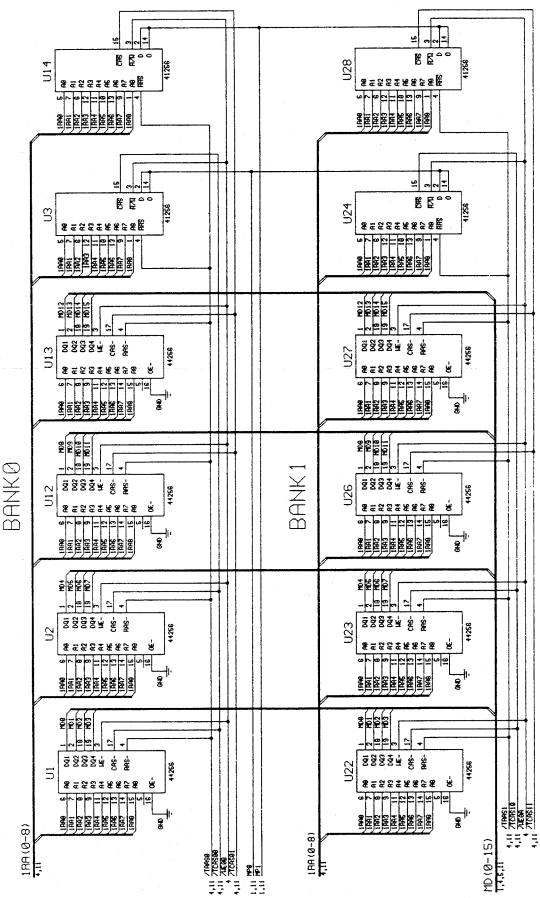


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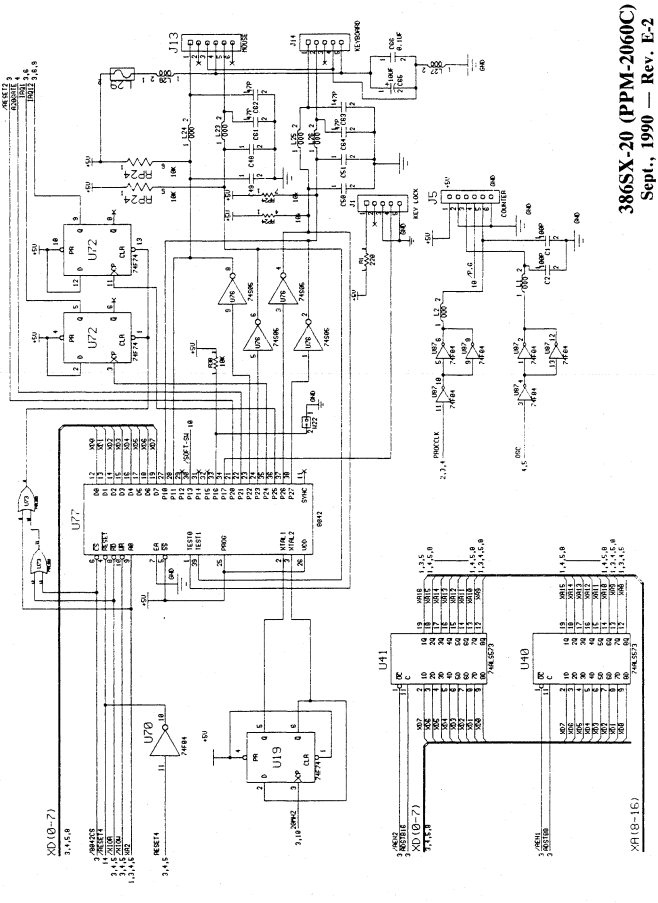

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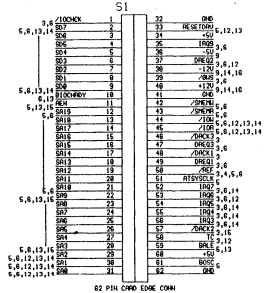


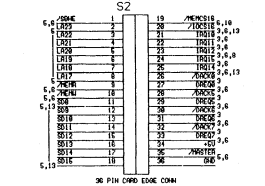


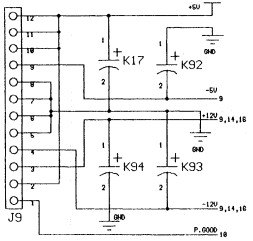


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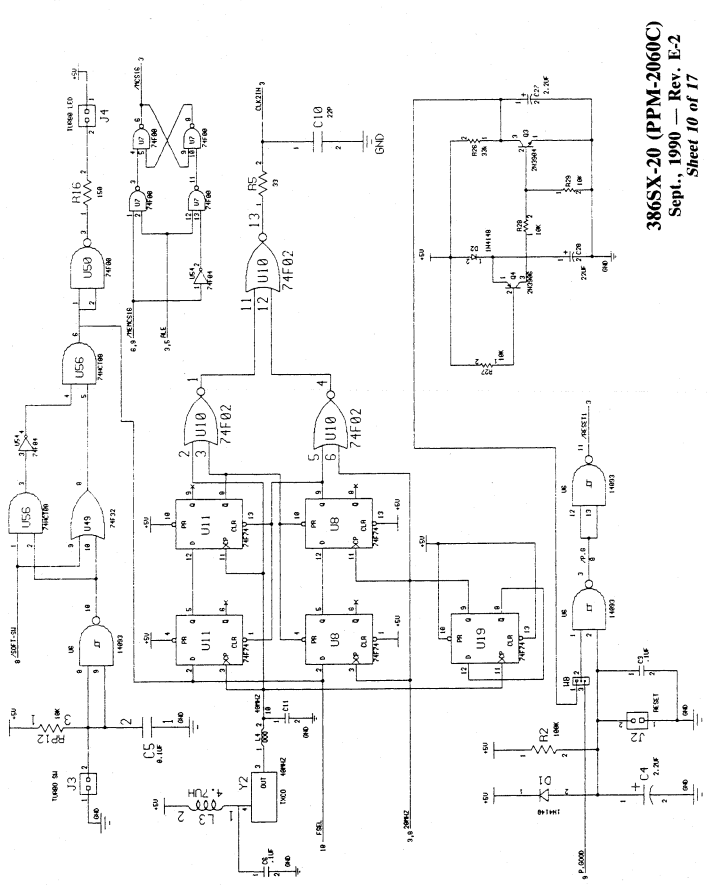

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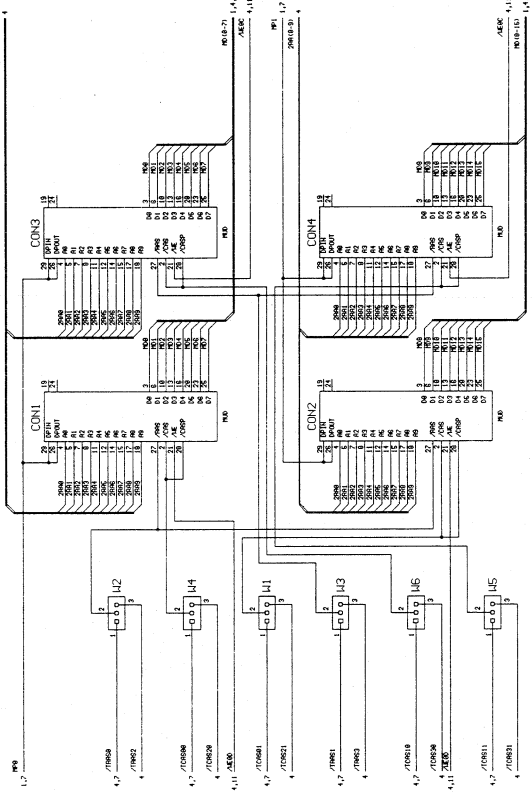


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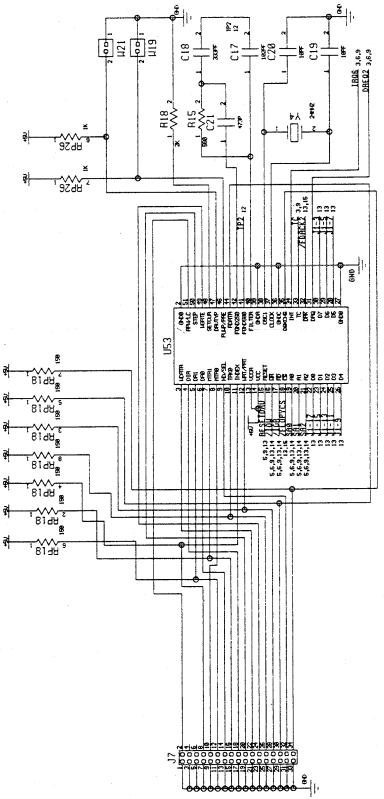

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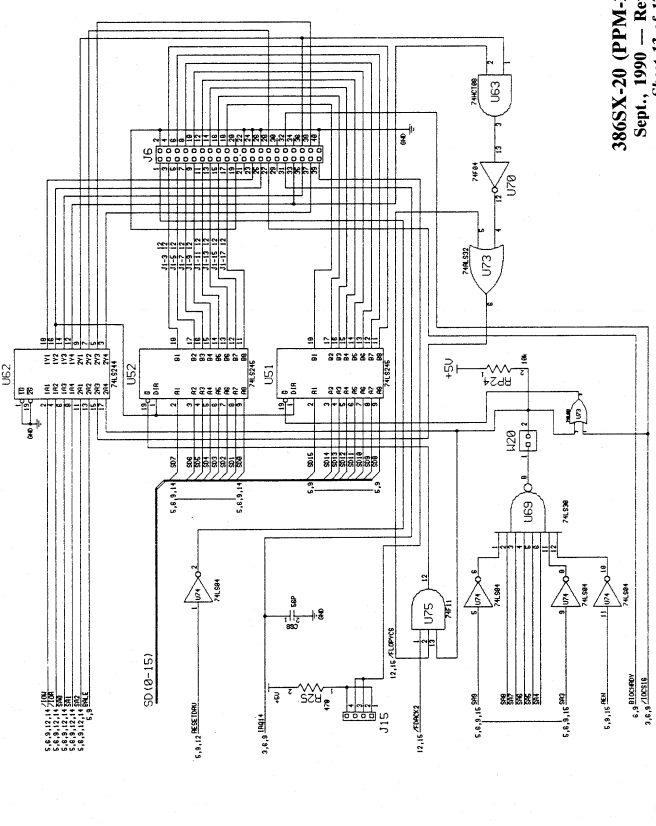

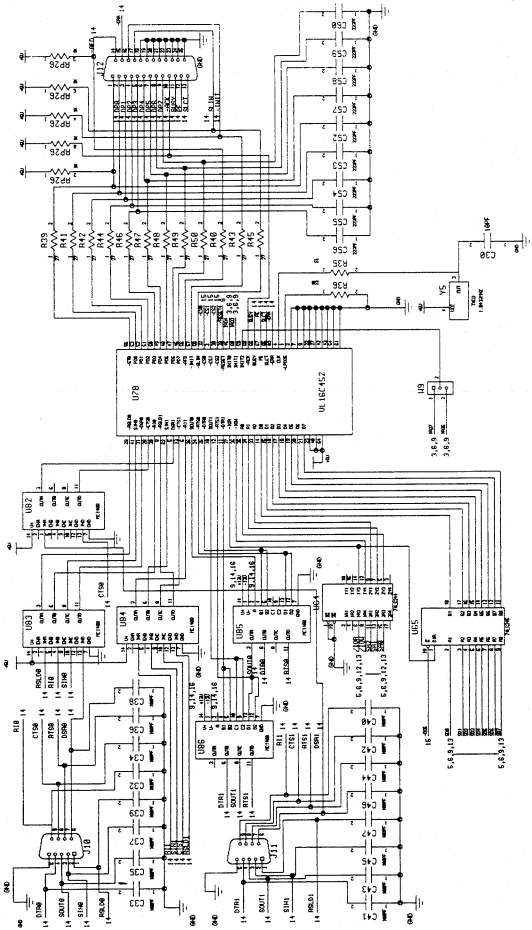

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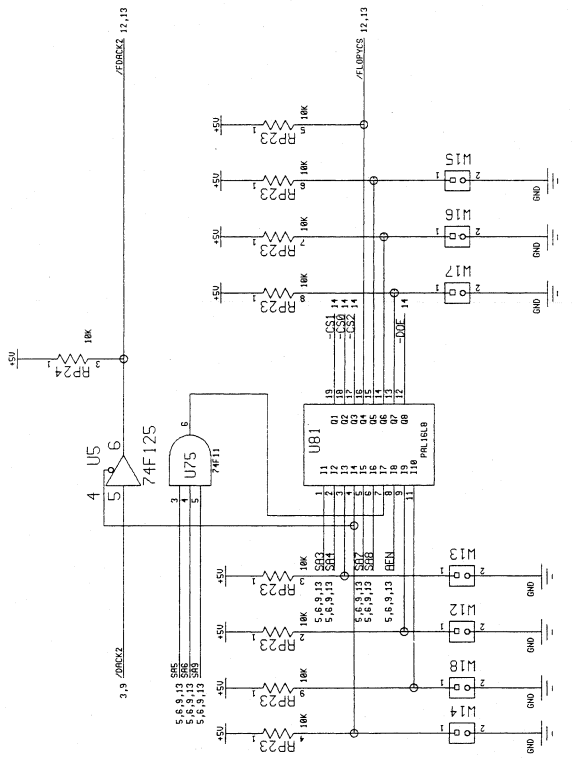

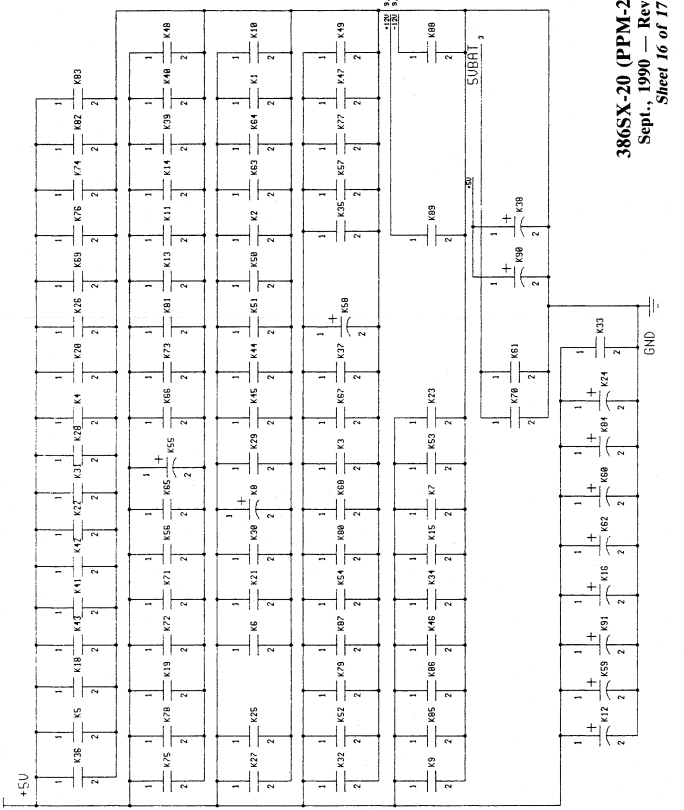


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